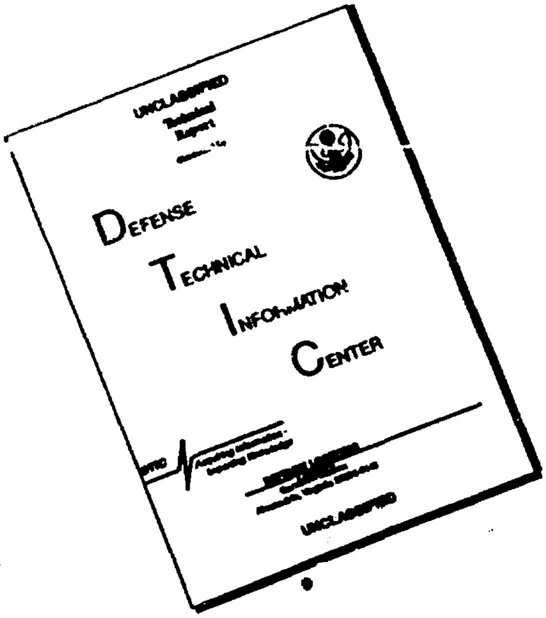
DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

(1)

DRAFT

COVER SHEET

Draft Environmental Impact Statement
Closure of Chanute Air Force Base

Responsible Agency: U.S. Air Force

Proposed Action: Withdrawal of military personnel and closure of Chanute Air Force Base

Written comments and inquiries on this document should be received by January 15, 1990 and addressed to:

Designation: Draft Environmental Impact Statement (DEIS)

Abstract: The U.S. Air Force proposed to withdraw military personnel and close Chanute Air Force Base prior to October, 1995. This proposal action is a result of the Defense Secretary's Commission on Base Realignment and Closure recommendations. The commission was chartered by the Secretary of Defense Frank Corlucci on May 3, 1988. The responsibility of the commission was to analyze military installations within the United States, its commonwealths, territories, and possessions for realignment and closure. The withdrawal and closure process will be phased to lessen the overall impact on military personnel as well as the socioeconomic impact on the surrounding community. The U.S. Air force will not be moving students from Chanute Air Force Base. The training classes will only be moved after the current class graduates. These transfers will occur over a three year period 1990-1992. As permanent base personnel and students move to another base they will not be replaced. The Alternative Actions evaluated in addition to the proposed action included the No Action alternative. This alternative was eliminated as a result of the Defense Secretary's Commission recommendations and the Base closure and Realignment Act (PL 100-526).

The Quick Withdrawal and Closure Alternative was also eliminated as a result of the commissions recommendations and enabling legislation. The potential environmental consequences of the alternatives were addressed under the following categories: general site description, physical environment, biological environment and human environment. This environmental impact statement only addressed biophysical affects of the withdrawal and closure process. A second environmental impact statement will be completed which will address the socioeconomic impacts of base closure and economic reuse and mitigation actions, as required.

(2)

Air Force
Environmental Planning Division
(HQ USAF/CEVP)

Room 5B269
1260 Air Force Pentagon
Washington, DC 20330-1260

16 Jul 93

MEMORANDUM FOR DTIC (Acquisition)
(ATTN: Pat Mauby)

SUBJ: Distribution of USAF Planning Documents Forwarded on 1 July 93

All the Documents forwarded to your organization on the subject date should be considered Approved for Public Release, distribution is unlimited (distribution statement A).

Jack Bush, GM-14
Mr. Jack Bush
Special Projects and Plans
703-697-2928
DSN 227-2928

1. DESCRIPTION OF AND NEED FOR PROPOSED ACTION

1.0 Introduction

The Defense Secretary's Commission on Base Realignment and Closure was chartered by Secretary of Defense Frank Carlucci on May 3, 1988, to recommend military installations in the United States, its commonwealths, territories, and possessions for realignment and closure. It has generally been accepted within the government that the national defense could be improved and costs reduced if the overall structure of the military base system were more efficient.

The Commission's analysis of military installations began with a review of the military force structure and its basing requirements. Once this review was complete, the Commission began the process of selecting bases for realignment and closure. To provide a more consistent analysis, installations with similar missions were grouped together. The next step involved screening the bases to determine whether the installation was appropriately sized and physically able to accomplish its mission.

As a result of this process the Commission included Chanute Air Force Base (Air Force Base) on their list of military installations closures. This decision was accepted by the Secretary of Defense, and subsequently by the Congress. Chanute Air Force Base is one of five Air Training Command Technical Training Centers which provide specialized training for officers, airmen, and civilians of the Air Force, as well as other Department of Defense agencies. Major training courses include fire fighting, aircraft and missile maintenance, and fuel contamination and inspection training. Chanute Air Force Base also prepares extension and career development courses, specialty training standards, training manuals, on-the-job training advisory services, and reviews field training courses.

The commission recommended Chanute Air Force Base for closure primarily because of reduced mission effectiveness caused by lower quality facilities, limited availability of facilities, and excess capacity within the technical training category. Chanute Air Force Base is lower in military value than others because the facilities detract from its mission effectiveness.

This Environmental Impact Statement (EIS) addresses only the physical impacts of the closure of Chanute Air Force Base. A second EIS will be prepared to address the socioeconomic impacts of base closure and economic reuse and mitigation action.

1.1 Location of Proposed Action

Chanute Air Force Base is in the Village of Rantoul which is located in Champaign County in east-central Illinois. (See Figure 1.) The City of Champaign-Urbana is approximately 14 miles south of Chanute Air Force Base. The base has an area of 2,125 acres. Chapman Courts (49 acres), an off-base annex housing area in Rantoul provides housing for military personnel (See Figure 2). The base is bounded on the north by residential and commercial land, and on the east and south by agricultural land. The base is bordered on the west by U.S. Route 45. A small tributary of the Vermillion River, Salt Fork Creek, flows along the southern perimeter and through the southeastern corner of the base. (See Figure 3.)

1.2 Scoping Process and Preplanning Analysis

The National Environmental Policy Act (NEPA) of 1969 is the national policy on the protection of the environment. To make the NEPA process more useful to decision-makers and the public, the President's Council on Environmental Quality Regulations (40 CFR 1500-1508) includes a scoping process. The objective of the scoping process is to determine the scope of issues to be addressed and to identify significant issues related to the proposed action. As mentioned in the introduction, there will be two EIS's prepared.

The scoping process and preplanning analysis were conducted during several meetings held to address issues related to the proposed action. The issues raised in this scoping process were directed to the biophysical impacts of the withdrawal and closure of Chanute Air Force Base.

Delete

On March 1, 1989 meetings were held at Chanute Air Force Base. The meeting participants included representatives of military personnel from Chanute Air Force Base, the Air Training Command, and the Louisville Corps of Engineers. The topics discussed during these meetings included:

- Heat Plant
- Waste water Treatment Plant
- Landfill - disposal of demolition debris
- Asbestos
- Socio-economic issues
- Historic resources
- Contamination

The United States Air Force conducted a public meeting on March 1, 1989 to solicit comments and identify concerns related to the closure of Chanute Air Force Base. The issues raised by the public included:

- Physical and economic impact on the regional waste water facility
- Impacts of hazardous waste sites
- Demolition of abandoned waste water treatment facilities on Chanute Air Force Base
- Protection of existing water wells and the impact on Rantoul's water system
- Costs of environmental mitigations
- Land use issues
- Surface water and ground water impacts
- Removal and cleanup of buried fuel tanks
- Removal and disposal of asbestos hazards
- Removal and disposal of PCB's
- Demolition of unused buildings

1.3 Relevant Federal, State, and Local Statutes, Regulations or Guidelines

Federal and Air Force regulations relate to the proposed action. They are presented below:

Federal

- National Environmental Policy Act (NEPA) (PL 91-190)
- President's Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508)
- Fish and Wildlife Coordination Act (16 CFR, 661)
- Endangered Species Act of 1973 (16 CFR,1531)
- National Historic Preservation Act (16 CFR,470)
- Floodplain Management Execution Order (E.O. 11988)

- Protection of Wetlands Execution Order (E.O. 11990)
- Clean Water Act (33 CFR, 1251)
- Clean Air Act (42 CFR, 300(F))

Air Force

- Environmental Impact Analysis Process (EIAP) (AFR 19-2)
- Pollution Abatement and Environmental Quality (AFR 19-1)
- Environmental Pollution Monitoring (AFR 19-7)
- Interagency and Intergovernmental Coordination of Land, Facility, and Environmental Plans, Program, and Projects (AFR 19-9)
- Conservation and Management of Natural Resources (AFR 126-1)
- Natural Resources Land Management (AFM 126-2)

2. ALTERNATIVES CONSIDERED INCLUDING THE PROPOSED ACTION

2.0 Introduction

This section of the report provides a summary of all the alternatives considered. The discussion includes an explanation of what each of the alternatives were intended to accomplish, which preliminary alternatives were considered but rejected, and the proposed action.

This section presents the proposed action and the alternatives in sufficient detail to allow their environmental impacts to be compared. The process for development of these alternatives is in accordance with the Base Closure and Realignment Act which formulated the "No Action" and "Proposed Action" alternatives. The public hearing held March 1, 1989 provided an additional alternative: a quick withdrawal and closure process.

The "No Action" and quick withdrawal and closure alternatives were eliminated as a result of the enabling legislation and commission findings.

2.1 Alternatives Considered but Eliminated

2.1.1 Quick Withdrawal and Closure of Chanute Air Force Base

This alternative was proposed during the public scoping meeting held March 1, 1989, in the Rantoul Township High School Gym. The alternative proposed was for a quick withdrawal of military personnel and closure of Chanute Air Force Base. This alternative was eliminated from consideration as a result of the Defense Secretary's Commission on Base Realignment and Closure. These findings recommended a phased withdrawal and closure to lessen the impact on the military personnel and the impacts to the surrounding community.

2.1.2 The "No Action" Alternative

Under this alternative, none of the proposed actions would be taken, and the withdrawal and closure process would not be implemented. This alternative would necessitate the continuation of normal base operations by the Air Force.

As a result of the Base Closure and Realignment Act (PL 100-526) and the Defense Secretary's Commission report findings, the "No Action" alternative could only be implemented after the authority of the Secretary expires on October 1, 1995.

2.2 Alternative 1 (Proposed Action)

This alternative is the implementation of the Secretary of Defense Commission's recommendations on base realignments and closures. The recommendations include the withdrawal of military personnel and closure of Chanute Air Force Base.

The withdrawal and closure is to be a phased process. The process will be scheduled in accordance with the graduation dates for each training class. There are 20 categories of classes taught at Chanute. The first class graduation date that coincides with the closure process is August 1990. The last scheduled graduation class is in June 1992. Of the 20 categories of classes 15 of them will not have their final graduation date until 1992. After this final class, training classes will no longer be held at the base.

The Air Force will not be moving students from Chanute to the bases that will acquire the training functions. The students that graduate from training classes at Chanute Air Force Base will move on to their permanent assignments. After each "final" class graduates, that course will be offered at a different base. As a result of this transition the next class of students will travel directly to the new base for training.

Civil Service employees at Chanute Air Force Base will receive a job offer for a position in the Department of Defense. Personnel directly related to specific training courses will have the opportunity to move to the base that is acquiring the training course. Many of the military personnel at Chanute will be due for a permanent change of station when the base is scheduled for closure. At that time the military personnel will be transferred and the replacements will be assigned to the bases that acquire the training classes. The Air Force anticipates transferring some personnel prior to closure due to fewer personnel required for commissary, medical, base operating support, and tenant organization support at the new bases.

This phased process will be implemented to lessen the overall impact on both military personnel as well as the socioeconomic impact on the surrounding community. The socioeconomic impact of the base closure was a major concern expressed during the public hearing held by the Air Force at the Rantoul Township High School Gym on March 1, 1989. These concerns will be addressed in the second Environmental Impact Statement. The base closure should not result in negative environmental (Ecological) impacts according to the Commission report. The cleanup of hazardous materials and waste contamination at Chanute Air Force Base is covered by the Defense Environmental

Restoration Program and operates independent of the closure. Issues were raised at the public hearing relating to the Defense Environmental Restoration Program as well as other issues which are listed in Section 1.2.

As a result of the Base Closure and Realignment Act, the proposed action will be the alternative implemented.

CHANUTE AIR FORCE BASE CLOSURE ENVIRONMENTAL
IMPACT STATEMENT

TABLE OF CONTENTS

CHANUTE AIR FORCE BASE CLOSURE ENVIRONMENTAL
IMPACT ANALYSIS

LIST OF FIGURES

CHANUTE AIR FORCE BASE CLOSURE ENVIRONMENTAL
IMPACT ANALYSIS

LIST OF TABLES

TABLE OF CONTENTS (Continued)

PAGE

Figure 1

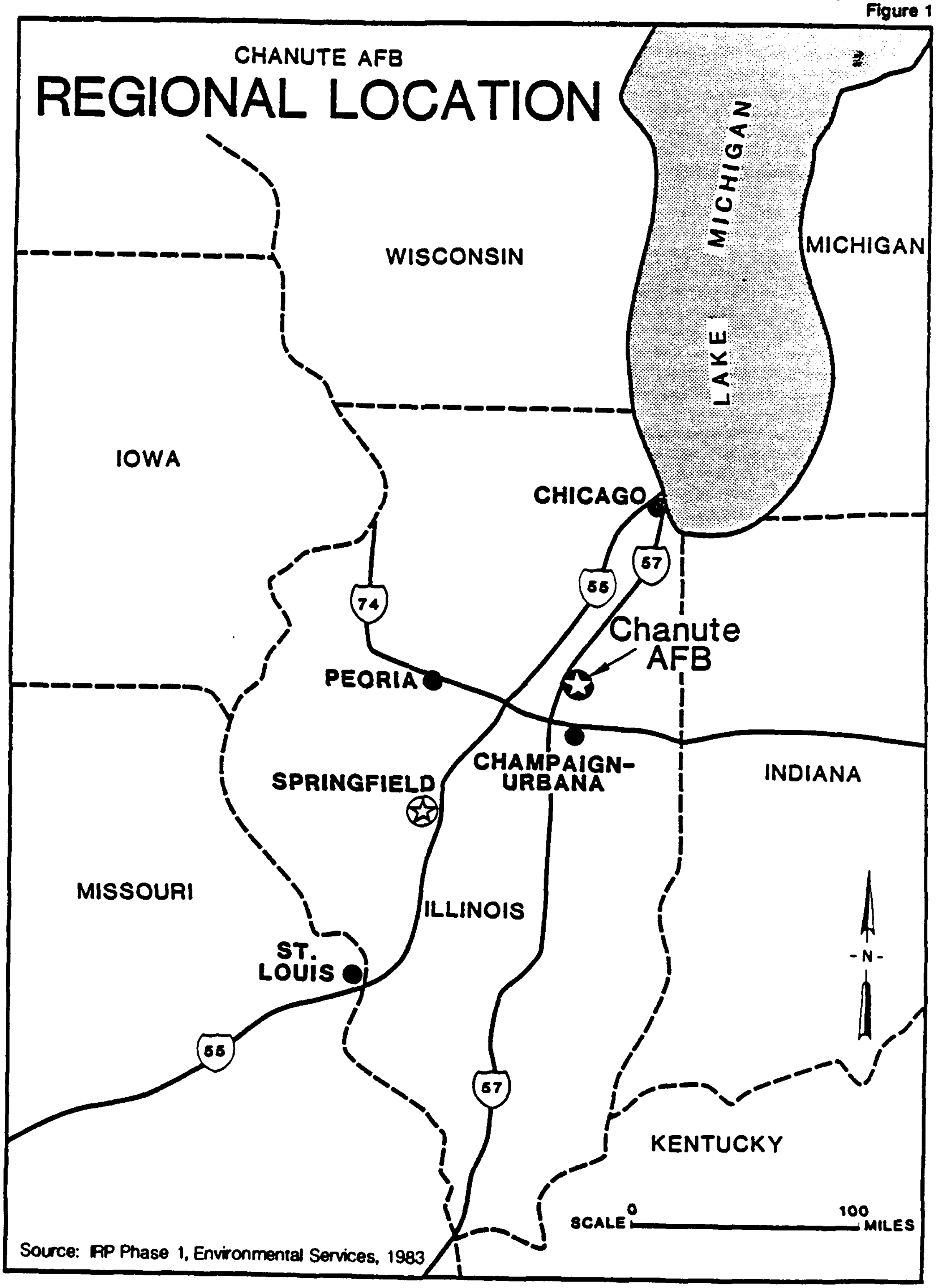
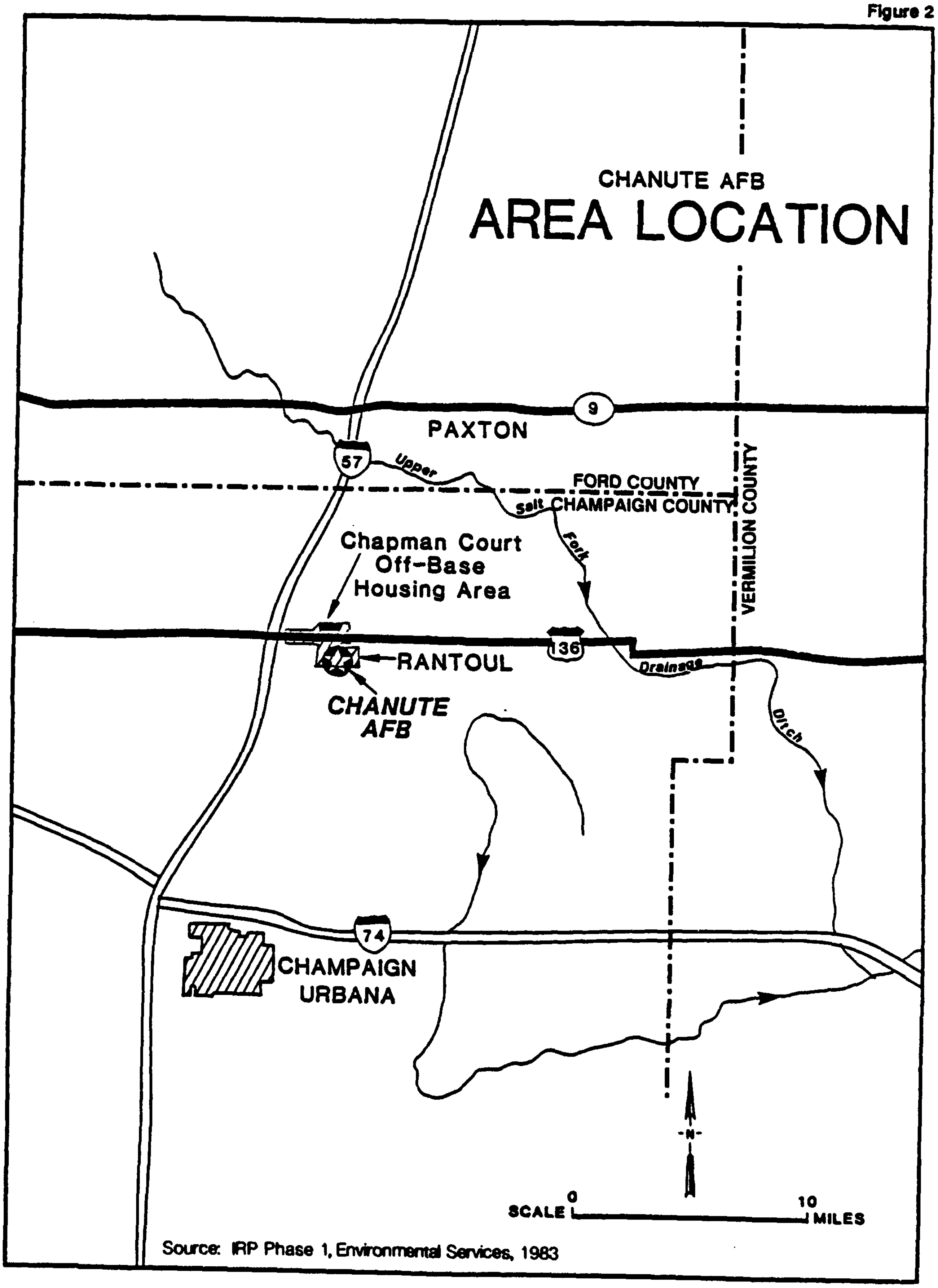

CHANUTE AFB
REGIONAL LOCATION
WISCONSIN
LAKE MICHIGAN
MICHIGAN
IOWA
CHICAGO
57
55
74
Chanute AFB
PEORIA
CHAMPAIGN-URBANA
SPRINGFIELD
INDIANA
MISSOURI
ILLINOIS
ST. LOUIS
N
55
57
KENTUCKY
SCALE 0 100 MILES
Source: IRP Phase 1, Environmental Services, 1983

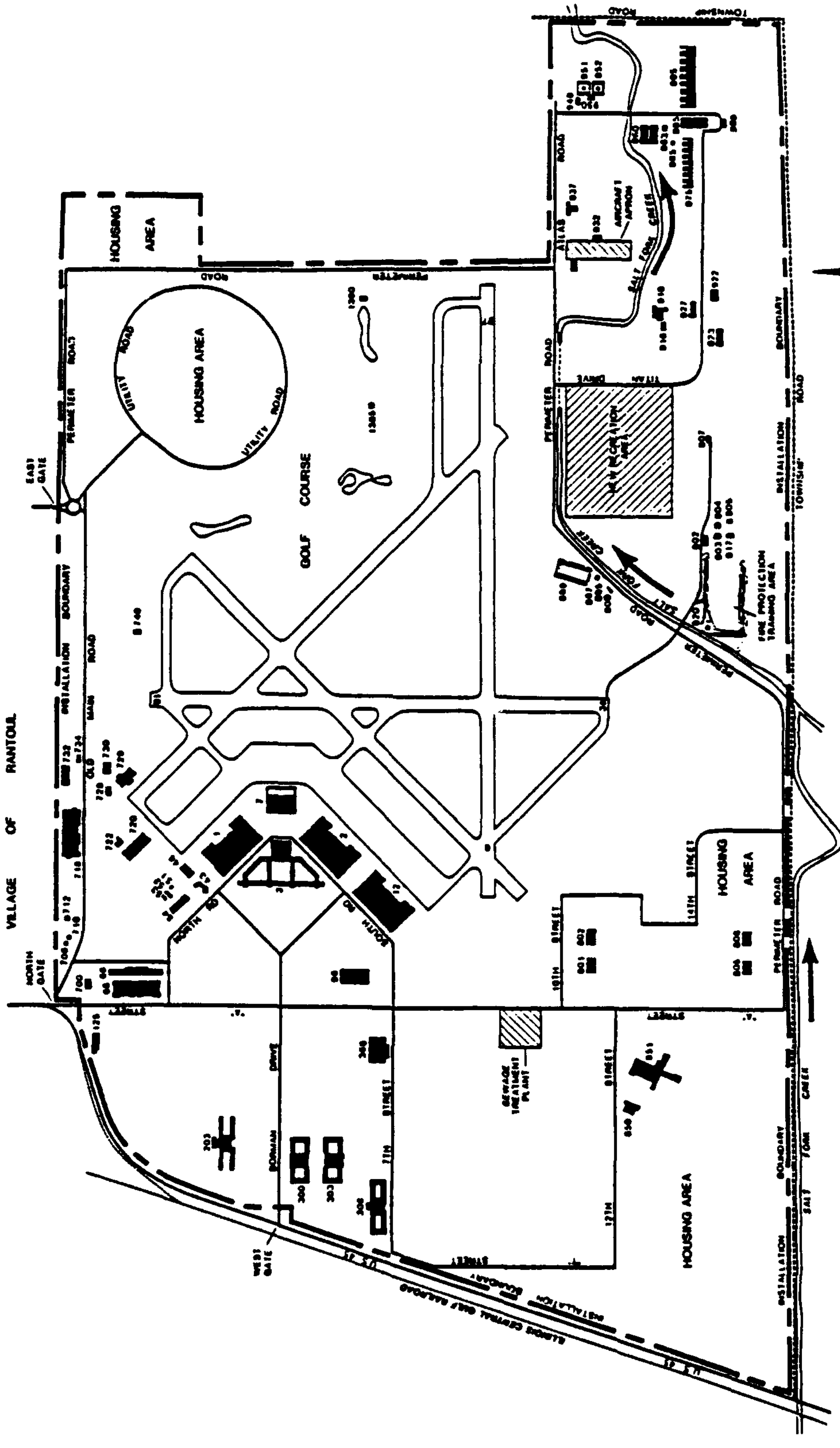
Figure 2



Source: IRP Phase 1, Environmental Services, 1983

Figure 3

CHANUTE AFB
INSTALLATION SITE PLAN



SCALE 0 2400 FEET

Source: IRP Phase 1, Environmental Services, 1983

3.0 INTRODUCTION

3.1 General Description of the Project Area

3.1.1 Climate

The Chanute Air Force Base and the Rantoul community have a temperate continental climate with characteristics reflecting its geographical position in Illinois. The climate is representative of the conditions found in east central Illinois, which is primarily an area of climatic transition between the northern and southern sectors of the state. This continental climate produces a wide range of temperatures from 100oF in the summer to -25oF in the winter. Heating requirements are based on an average of 5,808 degree days, shown in Table 1.

The average annual precipitation is 36 inches. The greater average precipitation occurs during the summer months of June (four inches) and July (five inches). The lowest average precipitation occurs in the winter months of January and February when precipitation usually does not exceed two inches.

The prevailing wind is generally from the southwest during the year. Occasionally during the winter months, the wind will come from the west or northwest. The average annual windspeed is approximately seven miles per hour. The average windspeed is usually greater during the winter and early spring, then subsides somewhat during the summer.

3.1.2 Topography

Chanute Air Force Base is located in a relatively level area between two glacially deposited moraines. The local topography, in addition to glacial influences, is the product of stream development. The land surface slopes from 750 feet mean sea level (MSL) at the northwest corner of the base near Building 136 to an elevation of 710 feet MSL along Salt Fork Creek at the southeastern installation boundary.

Table 1

MONTHLY CLIMATOLOGICAL DATA, 1970–1978
Urbana, Illinois

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperature (^{o}F)												
Highest	62	71	77	88	93	96	100	93	93	90	78	68
Lowest	-20	-6	-1	20	32	43	47	50	37	25	4	-20
Average Monthly Mean	19.8	29.1	40.4	52.6	63.2	70.7	74.7	72.8	66.6	54.8	41.6	30.1
Average Heating Degree Days	1,312	1,005	756	382	141	12	3	2	73	321	695	1,079
Precipitation (in.)												
Highest	4.64	3.33	6.55	7.71	6.31	7.05	10.96	10.01	8.67	4.75	4.17	6.16
Lowest	.98	.8	1.46	.59	1.40	1.22	1.47	1.39	1.52	.72	.57	.27
Average Total (All kinds)	1.70	1.92	3.71	3.35	3.65	4.01	5.16	4.85	3.84	2.04	2.49	3.17
Average Snowfall (Unmelted)	8.69	5.37	4.27	.44	-0-	-0-	-0-	-0-	-0-	-0-	3.23	7.47
Sky Conditions-Average # of days:												
Clear	6.9	6.3	5.9	7.0	8.8	8.6	7.9	8.1	8.2	10.1	5.3	5.8
Partly Cloudy	8.3	8.6	9.8	9.4	9.7	12.2	15.2	14.2	11.7	10.0	9.0	7.4
Cloudy	15.8	13.3	15.3	13.6	12.6	9.2	7.9	8.7	10.1	10.9	15.7	17.8
Wind												
Most frequent prevailing direction	W	NW	(1)	S	SW	SW	SW	SW	SW	SW	(1)	S
Average Speed (mph)	8.3	8.5	8.7	8.4	6.8	6.6	5.3	4.9	5.4	6.1	7.4	8.0

Note: (1) Wind direction varied considerably for these months.

(Source: Illinois State Water Survey, Urbana, Illinois)

3.2 Physical Environment

3.2.1 Earth Resources

3.2.1.1 Geology and Minerals

The geologic units of Champaign County include Paleozoic (major systems range from Silurian through Pennsylvanian) sedimentary rocks and Cenozoic (Quaternary) unconsolidated materials. These units are listed in stratigraphic sequence and described in Table 2. The principal rock stratigraphic unit characteristic of each major chronologic series or group is also listed in Table 2.

Study area surficial geology is dominated by a glacial deposits of the Wisconsinan stage (7,000 to 75,000 years ago). In many areas of Champaign County, a thin layer of loess covers the glacial deposits. The loess varies from two to four feet in thickness. Most modern soils of the county have developed in this layer.

Three major glacial stratigraphic units occur in the study area: Wisconsinan, Illinoian, and Kansan. The glacial deposits include cobbles, gravel, sand, silt, and clay which frequently occurs as "till," a somewhat dense mixture of particle sizes. The study area bedrock consists primarily of Devonian age shale and limestone.

The structural relationships of the study area geologic units is unique and has a direct bearing on their occurrence and character. One major structural feature is the LaSalle Anticlinal Belt, a narrow band along which the bedrock units have been folded upward into a ridge. This feature occurs approximately two miles west of Chanute Air Force Base. Prior to glacial deposition, the bedrock surface eroded into valleys that extend across Illinois. One such valley--the Mahomet Valley--extends across Champaign County just northwest of the base. The geologic structure is shown in Figure 4. Chanute Air Force Base is located along the southeast wall of Mahomet Valley. Glacial deposits are approximately 290 to 300 feet thick at Chanute Air Force Base due to the location of the bedrock valley.

Table 2

GEOLOGIC UNITS OF CHAMPAIGN COUNTY, ILLINOIS

GLACIAL DRIFT SECTION

TIME STRATIGRAPHY			PRINCIPAL ROCK STRATIGRAPHIC UNITS		GRAPHIC LOG	DESCRIPTION OF UNITS
QUATERNARY SYSTEM	PLEISTOCENE SERIES	HOLOCENE STAGE	Cahokia Alluvium			Mostly water-laid silt and sand; local gravel
		WISCONSINAN STAGE	WEDRON Fm. (15-140 ft)	Snyder till mbr		Gray clayey, silty till, NE part of county only; local sand and gravel at base and at till margin
				Batestown till mbr		Gray silty till, thin local sand at base
				Glen Burn till mbr		Grayish brown, thin, sandy, silty till. Locally thin basal sand
			Robein Silt			Organic silt "soil"
		SANGAMONIAN STAGE	GLASFORD Fm. (10-155 ft)	Berry Clay mbr		Thin silty clay "soil"
		ILLINOIAN STAGE		Radnor till mbr		Gray, silty till; locally thin lenses of sand and gravel
				Vandalia till mbr		Brownish gray, sandy till, locally extensive sand and gravel at top and bottom
				Smithboro till mbr		Dark brown, dark gray silty till
		YARMOUTHIAN STAGE	BANNER Fm. (0-240 ft)	Lierle Clay mbr		Thin, silty clay "soil"
		KANSAN STAGE		Tilton till mbr		Brownish gray, sandy silty till
				Hillery till mbr		Brown, reddish brown silty till
				Harmattan till mbr		Gray, olive gray silty till
				Hegeler till mbr		Greenish gray silty till
				Mahomet Sand		Fine, medium sand in upper part, grading to medium to coarse sand and gravel, locally coarse at base

UPPER BEDROCK SECTION

TIME STRATIGRAPHY: SYSTEM	SERIES OR GROUP	PRINCIPAL ROCK STRATIGRAPHIC UNITS	GRAPHIC LOG	DESCRIPTION OF UNITS
PENNSYLVANIAN	McLEANSBORO GROUP	0-630 ft		Mainly shale with thin sandstone, limestone, coal beds
	KEWANEE GROUP	0-350		
	McCORMICK GROUP	0-200		
MISSISSIPPIAN	CHESTERIAN SERIES	0-150		Shale, limestone, and sandstone
	VALMEYERAN SERIES	Ste. Genevieve Fm St. Louis Fm 0-170		Limestone
		Borden Fm 0-700		Limestone with intermediate shale, cherty in lower part
	KINDERHOOKIAN SERIES	0-100		Shale
DEVONIAN	UPPER SERIES MIDDLE SERIES	0-180		Shale and limestone
SILURIAN	NIAGARAN SERIES	0-600		Dolomite and limestone
	ALEXANDRIAN SERIES	0-25		

SOURCE: SANDERSON AND ZEWDE, 1976

Figure 4 shows that the three major glacial stratigraphic units appear to occur as relatively flat sheets of unconsolidated deposits in chronological succession. According to well logs at Chanute Air Force Base, the Wisconsinan stage is approximately 70-feet thick; the Illinoian stage is approximately 130-feet thick; and the Kansan stage is approximately 100-feet thick below the base.

Some sand and gravel deposits in Champaign County are associated with the glacial end moraines scattered throughout the county. A large deposit of sand and gravel located to the northeast and east of Rantoul. A few smaller deposits of sand and gravel are northwest of Rantoul. Several abandoned sand and gravel pits are in the large deposit, which is east and northeast of Rantoul. Currently, there is a sand and gravel extraction operation in the Chanute-Rantoul vicinity.

Salt Fork Creek, which runs through the southeast corner of the base, has several isolated bodies of pebbly sand throughout its course in Champaign County, but the creek probably lacks any sizable deposits of sand and gravel. No sizable deposits of sand and gravel are known to exist on Chanute Air Force Base.

3.2.1.2 Paleontology

There are no natural outcrops that would expose paleontological resources. Undiscovered materials may be in the bedrock below the base, but nothing near the surface. Fossils may be located in any imported rock used for construction such as riprap, but these fossils would not be locally derived.

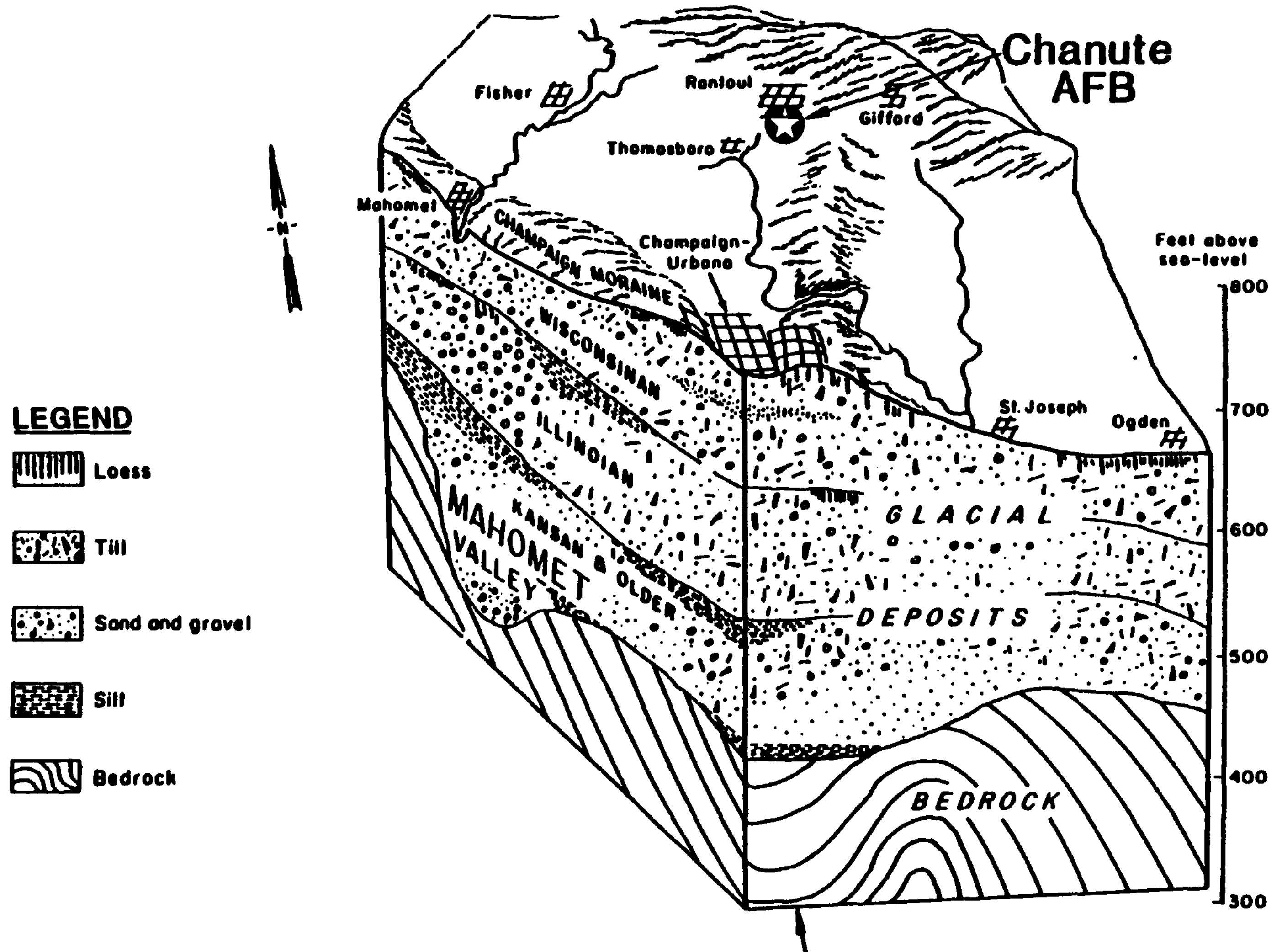
3.2.1.3 Soils

The soils on Chanute Air Force Base are classified into several categories, which are shown in Figure 5. Each soil is briefly described in Table 3. The soils on the base have moderate water erosion potential and are not very susceptible to wind erosion. Two of the dominant soils on the base--urban land and orthents--are found in the central and

Figure 4

CHANUTE AFB

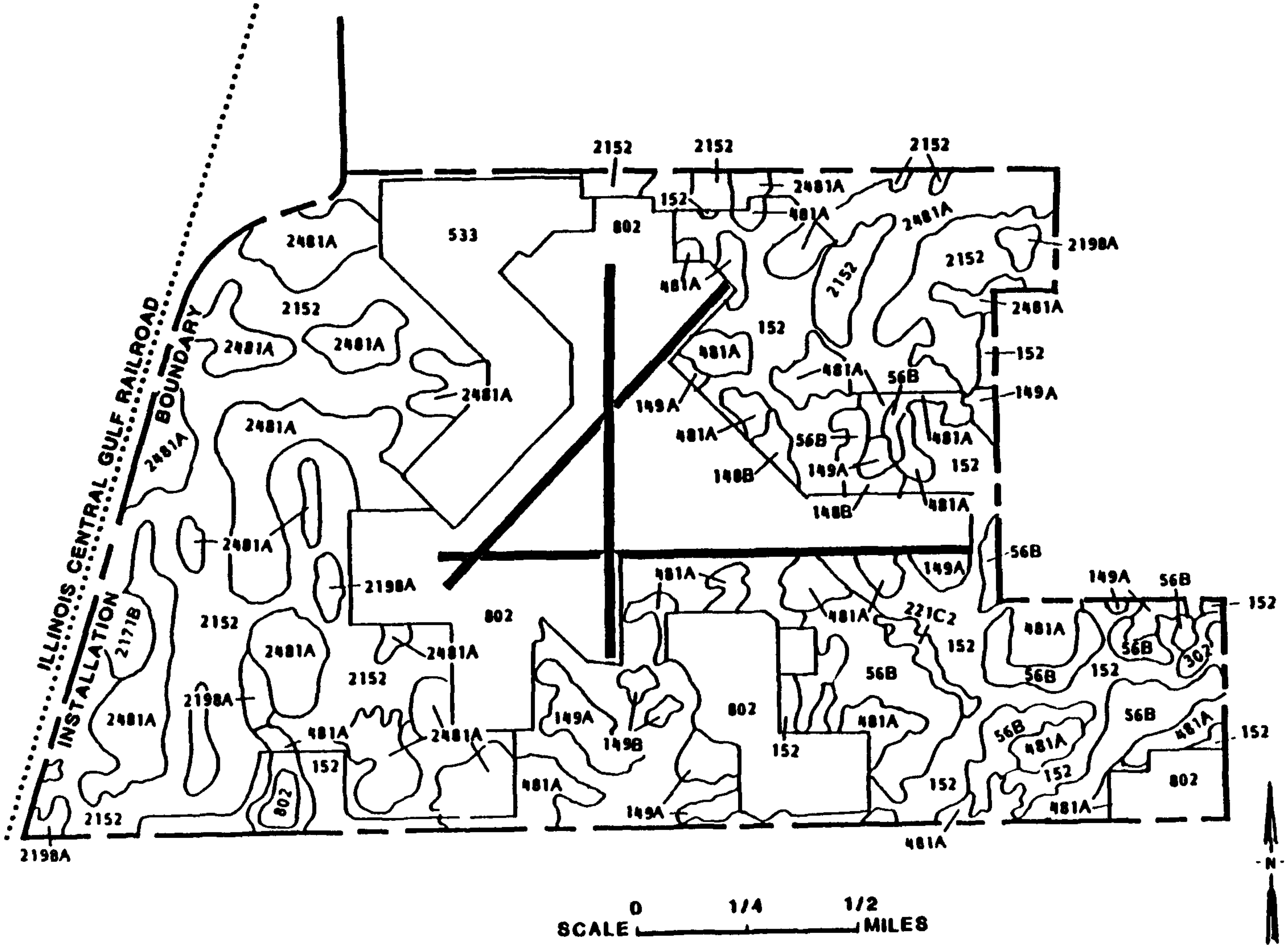
STUDY AREA BLOCK DIAGRAM



SOURCE: REINERTSEN, ET AL., 1977

Figure 5

CHANUTE AFB
BASE SOILS



SOURCE: USDA, SCS, 1982

TABLE 3
Chanute Air Force Base Soils

Map Symbol	Unit Description	USDA Texture (Major Fraction)	Thickness (Inches)	Unit Permeability (Inches/Hour)	Disposal Facility Use Constraints
56B	Dana silt loam, 2-5% Slopes	Silt loam, silty clay loam, clay loam	60	0.6 - 2.0	Slight
148B	Procter silt loam,	Silt loam, silty clay loam, clay loam, sand.	66	0.6- 6.0	Severe-wetness
149A	Brenton silt loam, 0-3% slopes	Silt loam, silty clay loam, loamy sand.	60	0.6 - 2.0	Severe-wetness
152	Drummer silty clay loam	Silty Clay loam, silt loam, clay loam.	60	0.6 - 2.0	Severe-ponding
221C2	Parr silt loam, 5-10% slope	Silt loam, clay loam, loam	60	0.6 - 2.0	Slight
302	Ambraw silty clay loam	Silty clay loam, clay loam loam	60	0.2 - 2.0	Severe-flooding
481A	Raub silt loam, 0-3% slopes	Silt loam, silty clay loam, clay loam, loam.	60	0.2 - 2.0	Severe-wetness
533	Urban land	*	*	*	*
802	Orthenta, loamy	*	*	*	*
2152	Drummer - urban land complex, 0-2% slopes	Silty clay loam, silt loam, clay loam, loam.	60	0.6 - 2.0	Severe-ponding
2171B	Catlin - urban land complex, 2-7% slopes	Silt loam, silty clay loam, loam, clay loam.	60	0.6 - 2.0	Moderate-wetness
2198A	Elbum - urban land complex, 0-3% slopes	Silt loam, silty clay loam, loam, sandy loam, sand.	66	0.6 - 6.0	Severe-wetness
2481A	Raub - urban land complex, 0-3%	Silt loam, silty clay loam, clay loam, loam.	60	0.2 - 2.0	Severe-wetness

* Properties not estimated
Source: USDA, Soil Conservation Service, 1982.

north-central sections of the base. The other soils vary in size from a small thin strip (Parr 221C2) of open space to large areas of soil (Drummer 2152, Raub 2481A) dominated by built areas, such as housing and offices.

The development of the base generally follows the soils that are most suited for development. The areas of open space also follow soils that are not generally suited for development. Because of improved construction practices, these land use patterns could possibly vary in the future as the base is redeveloped. The following paragraphs provide more information on each soil series.

The Ambraw series (302) consists of poorly drained, moderately slowly permeable or moderately permeable soils on bottom land and low stream terraces. Slopes range from zero to two percent. Due to this series wetness, very little potential exists for any use other than wildlife habitat. This soil series is found on the southeast section of the base along Salt Fork Creek.

The Brenton series (194A) consists of somewhat poorly drained, moderately permeable soils on outwash plains. Slopes range from zero to three percent. This series is not well suited for recreation or building site development because of wetness. The potential for wildlife habitat is fair to good. A number of crops can be grown on this soil. This soil series is found in open space areas such as the golf course on the eastern half of the base.

The Catlin series (2171B) consists of moderately well-drained, moderately permeable soils on till plains and moraines. Slopes range from two to seven percent. This soil has severe restrictions to recreational development because of excess humus but is good for most wildlife habitat. Building site development has moderate restrictions. This soil is found in the southwest section of the base in the housing area.

The Dana series (56B) consists of moderately well-drained soils on till plains and moraines. Permeability is moderate in the upper soil material and moderately slow in the underlying material. Slopes range from two to five percent. Corn, soybeans, winter wheat, and hay are common crops grown on this soil. There are slight restrictions to recreational development. Wildlife habitat potential is good except for wetland areas. Building site development has only moderate restrictions with the exception of roads, which have a severe restriction. This soil is found on the eastern half of the base on the golf course and the training area in the southeast corner of the base.

The Drummer series (152, 2152) consists of poorly drained, moderately permeable soils on outwash plains or till plains. Slopes range from zero to two percent. Several types of crops are grown in Drummer (152). Recreation and building site development are severely restricted because of the standing water that accumulates in low lying areas. Wildlife habitat potential is fair to good. These soils are found throughout the base. Drummer 152 is generally found in areas of open space such as the golf course. Drummer 2152 is one of the two predominant soils in the housing and office areas.

The Elburn series (2198A) consists of somewhat poorly drained, moderately permeable soils on out wash plains. Slopes range from zero to three percent. The recreational and building site restrictions are generally severe due to the wetness of the soils, but the wildlife habitat potential is fair to good. This soil can be found in the housing areas located to the northeast and occurs as open space areas in the southwest sections of the base.

The Parr series (221C2) consists of well-drained, moderately permeable soils on moraines and till plains. Slopes range from two to 15 percent. Several crops are commonly grown in this soil. Development restrictions range from slight to severe depending on the type of development. Slope is a limiting factor for recreation development and small commercial buildings. Shrinking and swelling of the soil also affects development. Wildlife habitat potential is good except for wetland areas. This soil is found in a small area in the southeast section of the base just south of Salt Fork Creek.

The Proctor series (148B) consists of moderately well drained, moderately permeable soils on outwash plains and stream terraces. Slopes range from one to five percent. Several types of crops are grown in this soil. Recreation development restrictions are generally slight. Building development restrictions range from slight to severe depending on the type of development. The wildlife habitat potential is good except in the wetland areas, where it is poor. This soil can be found on the northeast section of the base on the golf course.

The Raub series (481A, 2481A) consists of somewhat poorly drained, moderately slowly permeable soils on till plains and moraines. Slopes range from zero to three percent. Corn, soybeans, winter wheat, and hay are common crops grown in this series. Residential and building site restrictions are moderate to severe depending on the type of development. Wildlife habitat potential is fair to good. This series can be found throughout the base. Raub (481A) is found in areas of open space such as the golf course and throughout the base. Raub (2481A) along with the Drummer series (2152) are the dominant soils in the housing and office areas of the base.

Urban Land (533) occurs as areas covered by pavement and buildings. More than 85 percent of this map unit is covered by buildings and pavement. This soil occurs in the north central part of the base. This section of the base is dominated by the aircraft hangars and other base operations. The soils have been so extensively modified by cutting and filling that they cannot be identified.

Orthents (802) are moderately fine textured to moderately coarse textured. This moderately well-drained to somewhat poorly drained soil has been modified by filling and leveling. This soil is found in the aircraft runway section and has the largest contiguous area on the base. The runways have been closed since 1971. The soil areas between the runways have been used as cropland for corn and soybeans.

3.2.1.4 Hazardous Waste Sites, Installation Restoration Program

From 1984 to 1986, seven sites were investigated for possible contamination from hazardous wastes. These sites are located in the southeastern section of the base (see Figure 6). Since the original investigation, seven more sites have been added to the Installation Restoration Program (IRP) investigation list for future study. These sites are explained in Table 4 and the sites are also shown in Figure 6. Two rounds of water samples were taken at each site. These water samples were taken from test wells and water bodies located adjacent each site. The results of these samples are presented in Appendix A.

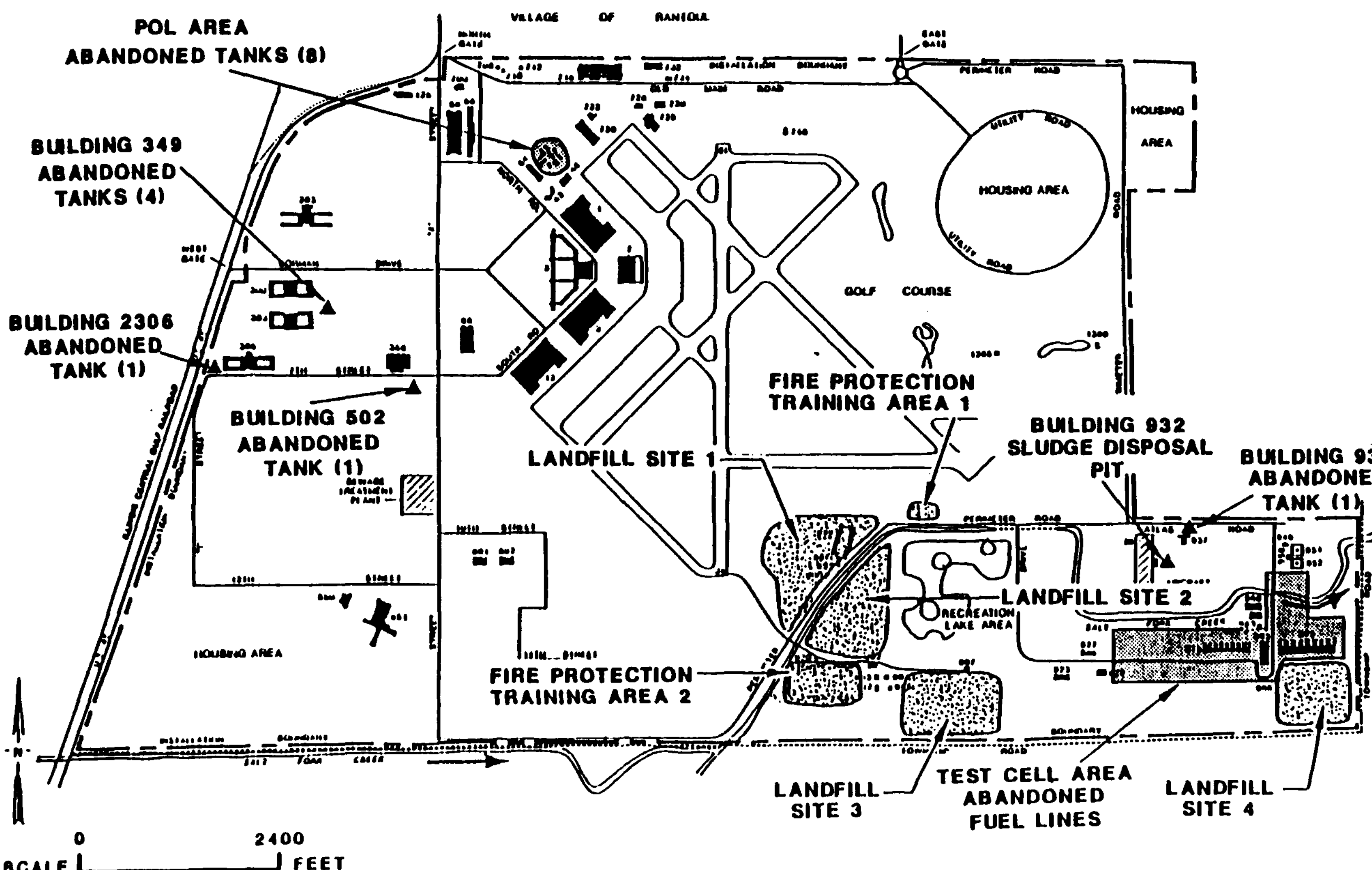
Landfill Site 1 occupies 19 acres between the east-west runway and Landfill Site 2. This site was in operation from the late 1930s to 1960. Base garbage, paper, wood, metal, ashes, aircraft parts, unrinsed pesticide drums, shop wastes, and construction/demolition debris were buried at depths of eight to 10 feet. The soils in the area of this site are moderately slow to moderately drained with 20 to 32 percent clay.

Total dissolved solids (TDS) concentrations varied between 346 and 738 mg/l (milligrams per liter) in the up gradient wells and between 280 and 1,080 mg/l in the down gradient well. The highest level of total organic carbon (TOC) was 14.4 mg/l. Phenolic concentrations of 0.012 and 0.009 mg/l were reported in second round samples. Oil and grease concentrations varied between 0.18 and 0.9 mg/l in the first round and between 0.18 and 0.27 mg/l in the second samples.

Landfill Site 2 occupies an approximate 20-acre tract immediately north of Fire Protection Training Area 2. This landfill was used from the early 1950s to 1965 to dispose of trash,

Figure 6

SITES UNDER INVESTIGATION



SOURCE: IRP PHASE I, ES 1983, AND PHASE IV-A, HMTC 1986

Table 4

Hazardous Waste
SITES UNDER INVESTIGATION

Site Identification Number[3]	Site Description	Location on Base	Approximate Size of Facility	Previous IRP Phase II Study
LF-1	Landfill Site 1	SE	19 acres	Yes
LF-2	Landfill Site 2	SE	20 acres	Yes
LF-3	Landfill Site 3	SE	20 acres	Yes
LF-4	Landfill Site 4	SE	16 acres	Yes
WP-1	Building 932 Tank Sludge Disposal Pit	SE	1 acre[1]	Yes
FT-1	Fire Protection Training Area 1	SE	2 acres	Yes
FT-2	Fire Protection Training Area 2	SE	15 acres	Yes
LU-1	Building 349 Abandoned Tank 1	NW	3,000 gal (MOGAS)	No
LU-1	Building 349 Abandoned Tank 2	NW	3,000 gal (MOGAS)	No
LU-1	Building 349 Abandoned Tank 3	NW	4,000 gal (MOGAS)	No
LU-1	Building 349 Abandoned Tank 4	NW	1,000 gal (No. 2 oil)	No
LU-2	Building 51/POL Area Abandoned Tank 12	NW	10,000 gal (Diesel)	No
LU-2	Building 51/POL Area Abandoned Tank 13	NW	10,000 gal (Diesel)	No
LU-3	Building 2306 Abandoned Tank	NW	1,100 gal (No. 2 oil)	No
LU-5	Building 937 Abandoned Tank	SE	2,000 gal (Slop)	No
LU-6	Building 502 Abandoned Tank	NW	1,100 gal (No. 2 oil)	No
LU-6	Building 503 Abandoned Tank	NW	1,100 gal est. (No. 2 oil)	No
LU-7	Building 53 & 58/POL Area Abandoned Tank 4	NW	25,000 gal (MOGAS)	No
LU-7	Building 53 & 58/POL Area Abandoned Tank 5	NW	25,000 gal (JP-4)	No
LU-7	Building 53 & 58/POL Area Abandoned Tank 6	NW	25,000 gal (JP-4)	No
LU-7	Building 53 & 58/POL Area Abandoned Tank 9[2]	NW	11,600 gal (MOGAS)	No
LU-7	Building 53 & 58/POL Area Abandoned Tank 10[2]	NW	11,600 gal (MOGAS)	No
LU-7	Building 53 & 58/POL Area Abandoned Tank 11[2]	NW	11,600 gal (MOGAS)	No
OT-1	Test Cell Abandoned Fuel Lines	SE	46 acres	No

(1) Including fuel spill area.

(2) Only these three tanks out of the eight abandoned tanks in the POL investigation area will be removed due to the congested piping around active fuel tanks. That is, only Tanks 9, 10, and 11 in the LU-2 and LU-7 areas will be removed.

(3) Note: Tanks previously designated by the ATC as LU-4 and LU-8 were determined to have already been removed.

Source: IRP Remedial Investigation - Feasibility Study (Phase II - IVA), 1987 shop residuals, and construction debris. It is also suspected that four 55-gallon drums containing the herbicides "2, 4-D" and "2, 4, 5-T" were buried in the landfill at a depth of eight to 10 feet. The soils in this area are moderately slowly to moderately well-drained with 11 to 32 percent clay.

Total dissolved solids at concentrations of 1,100 and 1,070 mg/l were reported at one well. Total dissolved solids concentrations from Salt Fork Creek varied between 310 and 430 mg/l. TOC concentrations ranged from 181 mg/l to 5.8 mg/l at the well, and 1.4 mg/l to 3.6 mg/l at Salt Fork Creek. A concentration of 0.0032 mg/l of trichloroethylene was the only volatile organic compound reported. A phenol concentration of 0.007 mg/l was reported in a second round sample.

Landfill Site 3, occupies approximately 20 acres south of the new recreation area. This landfill was used from 1967 to 1970 for base garbage, refuse, shop wastes, and construction/demolition debris. Pesticide drums may have been buried at this site. Wastes were buried at depths of six to eight feet. Soils in this area are moderately slowly to moderately permeable with 11 to 32 percent clay.

TDS concentrations varied between 206 and 1,000 mg/l in both samples. TOC concentrations varied from 4.0 mg/l to 22.5 mg/l in the first round and 3.4 mg/l to 8.4 mg/l in the second sample. Phenolic concentrations were reported in the second round of 0.006, 0.0015, and 0.009 mg/l. Volatile organic concentrations were detected in the second round ranging from 0.018 mg/l for ethyl benzene to 0.096 mg/l for xylene. Oil and grease concentrations ranged from not detected to 0.53 mg/l in the first and second round. One exception was a well with an oil and grease concentration of 0.064 mg/l.

Landfill Site 4 occupies 16 acres in the extreme southeast corner of the base. From 1970 to 1974, garbage, refuse, shop residues, and construction/demolition debris were buried at this site at depths of eight to 10 feet. These soils can be moderately poorly drained to moderately well drained.

TDS concentrations varied between 348 mg/l and 1,280 mg/l. Volatile organic concentrations were detected. Chloroethane at a concentration of 0.0085 and five petroleum hydrocarbon volatile organic compounds were detected at concentration of less than 0.010 mg/l. Phenol concentrations of 0.008 and 0.007 mg/l were found. Oil and grease concentrations ranged from not detected to 6.49 mg/l.

Building 932 Tank Sludge Disposal Pit has operated since the mid-1950s to dispose of fuel tank sludge. Numerous fuel spills have occurred in this area. The soil is moderate to moderately slow permeability with a clay content of 11 to 27 percent.

TOC concentrations ranged from 3.7 mg/l to 2.5 mg/l from the well and 3.7 mg/l to 6.3 mg/l for the Salt Fork Creek sample. A phenolic concentration of 0.007 mg/l was reported. A sludge sample for EP lead showed a concentration of 50 mg/l.

Fire training exercises were conducted at the Fire Protection Training Area 1 from the early 1950s to 1965. Waste fuels, paints, solvents, and thinners were used as combustion agents at this site. Protein foam was used as the extinguishing agent. The soil is moderately permeable with 27 to 32 percent clay.

TDS concentrations ranged from 468 mg/l to 922 mg/l. TOC concentrations ranged from 7 mg/l to 22 mg/l. Oil and grease concentrations varied from 0.12 mg/l to 0.17 mg/l. Phenolic concentrations increased between samples from not detected to 0.007 mg/l.

The Fire Protection Training Area 2 occupies approximately 15 acres, south of Landfill Site 2. Prior to the late 1970s, waste oils, solvents, hydraulic fluids, fuel filters, and virgin JP-4 jet fuel were used as combustion agents. Since the 1970s, only JP-4 has been used to comply with state and federal air emission standards. Currently, six to 12 structural burns are conducted per week. Dry chemicals and halon have been used as extinguishing agents since 1981. This soil is moderately permeable with a clay content of 20 to 30 percent.

The concentration of TDS varied from 310 mg/l to 748 mg/l and 292 to 728 mg/l from one well. Another well had concentrations ranging from 388 to 428 mg/l and 402 to 1,490 mg/l. The Salt Fork Creek station samples varied from 390 to 282 mg/l. Concentrations of TOC exceeded 1 mg/l for all locations with the maximum being 534 mg/l for surface water samples, and 63.7 mg/l for ground water samples. The organic solvents trichloroethylene and 1, 2-trans dichloroethylene were detected at levels less than 0.003 mg/l. Chloroethane was detected at 0.004 mg/l. Benzene, xylene, and toluene had maximum levels at 0.045, 0.082, and 0.050 mg/l respectively for surface water samples, and 0.069, 0.015, and 0.012 mg/l for ground water samples. Volatile organic compounds associated with petroleum products were found. Levels of 0.071, 0.028, and 0.023 mg/l were reported for benzene, xylene, and toluene respectively in a ground water sample. A chloroethane concentration of 0.0041 mg/l was detected. Ethyl benzene and xylene concentrations of 0.0021 and 0.018 mg/l, respectively were found at a surface sampling station. Trichloroethylene was detected at 0.0038 mg/l in a testing well.

Oil and grease concentrations from ground water samples varied from 0.15 and 2.34 mg/l. A maximum oil and grease concentration of 16,400 mg/l was reported at a surface impoundment sampling station. Salt Fork Creek had oil and grease concentrations of 0.1 and 0.76 mg/l respectively. Phenol concentrations varied from 0.006 to 0.014 mg/l in ground water, 0.043 to 0.296 mg/l on surface impoundments, and 0.008 at Salt Fork Creek. The only EP TOX metal found was barium reported at 0.07 mg/l.

Fifteen underground storage tanks have been identified as abandoned at the base. These tanks, located at several buildings throughout the base, range in size from 1,000 to 25,000 gallons. Table 4 summarizes the former contents and probable current status of each tank. Figure 6 shows the tank locations.

The abandoned underground tank at Building 937 appears to be located very close to the building structure. The soil at this location is moderately permeable with a clay content of 20 to 32 percent.

The four tanks at the Building 349 site are probably located under a paved parking area. The soil at this location is moderately permeable with a clay content of 20 to 32 percent.

The tank at the former Building 502 site (the building no longer exists) appears to be in a grass covered area near the adjacent Hawk Street. The soil at this location is moderately permeable with a clay content of 27 to 32 percent.

The former Building 2306 site (Building 2306 no longer exists but was located near the current Building 306) probably has a tank located under an area covered with grass and shrubbery. The soil at this location is moderately slowly permeable with a clay content of 20 to 32 percent.

The abandoned tanks at the POL Site are generally located in an area covered with gravel; numerous ground-level facilities also exist. These soils have been extensively modified so they cannot be identified.

The Test Cell Area Abandoned Fuel Lines Site is in the southeastern part of the base. The fuel lines have been abandoned. When active, the fuel lines transmitted fuel to the test cell areas during training exercises. The soils are moderately to moderately slowly permeable and have a clay content of 11 to 32 percent.

Chanute Air Force Base does not have detailed inventories of asbestos and PCB locations at this time. The asbestos inventory is due to be completed by August 1990. The PCB inventory is to be completed by March 1990.

Installation Restoration Program

All of these sights will either continue to be monitored or begin to be monitored through the Installation Restoration Program (IRP). The Installation Restoration Program was devised in 1976 by the Department of Defense (DOD). The purpose of the IRP is to assess and control migration of environmental contamination that may have resulted from past operations and disposal practices on DOD Facilities and to assess the probable migration of hazardous contaminants. In response to Resource Conservation and Recovery Act enacted by the United States Environmental Protection Agency in 1976 and in anticipation of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund), the DOD issued DEQPPM 80-6 (June 1980, Defense Environmental Quality Program Policy Memo) requiring identification of past hazardous waste disposal sites on DOD-agency installations. The IRP has been developed as a four-phase program.

Phase I - Problem Identification/Records Search
Phase II - Problem Confirmation and Quantification
Phase III - Technology Base Development
Phase IV - Corrective Action

The IRP for Chanute Air Force Base is currently in Phase II, a remedial investigation/ feasibility study.

The IRP is applicable to sites of releases or spills during past hazardous waste management efforts. It does not apply to future spills or releases. Planning for such incidents must be in accordance with the Air Force's "Guidance Manual for the Preparation of Spill Prevention and Response Plans" (AFESC, 1987).

3.2.2 Air Resources

3.2.2.1 Regional Air Quality

The Chanute Air Force Base-Rantoul community is within the Illinois Environmental Protection

Agency's East Central Illinois Intrastate Air Quality Control Region. A monitoring station is located in Champaign County in the City of Champaign. This monitoring station is part of the Illinois State/Local Air Monitoring Station (SLAMS) network and is located 15 miles south of Rantoul. This site monitors levels of sulfur dioxide and ozone. Until recently, a second monitoring station, which monitored total suspended particulates, was located in the City of Champaign. This monitoring station was removed in 1988, due to the switch by the United States Environmental Protection Agency to monitoring of particulate matter with a nominal diameter of less than 10 micrometers (PM-10). The current national ambient air quality standards for particulate matter is only for PM-10, even though Illinois continues to have standards for total suspended particles. The sampling results for Champaign County are shown in Table 5. The summary of National and Illinois Ambient Air Quality Standards is shown in Table 6.

Total suspended particulate (tsp) values exceeded the primary standard in Champaign County once in 1987 when the value reached 394 micrograms per cubic meter (ug/m^3). The tsp primary standard value was not exceeded in 1988. The secondary standard was exceeded once during 1987, but not during 1988. During 1988 the highest value was 134 ug/m^3. The trend over the previous six years shows that tsp values have remained stable.

Sources of tsps include combustion of fossil fuels, wind, and mechanical erosion of soil. The high values were partially attributed to the hot, dry climatic conditions that existed in 1987, according to the Illinois Environmental Protection Agency.

The ozone levels in Champaign County did not exceed the primary standard in 1987 or 1988. The highest levels of ozone were 0.123 parts per million (ppm) in 1987 and 0.112 ppm in 1988. Ozone is not directly emitted from pollution sources but is formed from emissions of nitrogen oxides and non-methane organic compounds in the presence of heat and sunlight.

TABLE 5

Summary of Monitored Air Quality in Champaign County, Illinois

Total Suspended Particulates
(micrograms per cubic meter)

East Central Illinois Intrastate Champaign County Champaign, Ill.	Number of Samples		Highest Samples			
	>150 ug/m^3	>260 ug/m^3	1	2	3	4
1988	0	0	134	123	117	114
1987	1	1	394	148	144	106

OZONE
(parts per million)

East Central Illinois Intrastate Champaign, County Champaign, Ill.	Number of days Greater than 0.12 ppm	Highest Samples			
		1	2	3	4
1988	0	0.112	0.100	0.099	0.098
1987	0	0.123	0.099	0.094	0.091

Sulfer Dioxide
(parts per million)

East Central Illinois Intrastate Champaign County Champaign, Ill.	Number of Samples		Highest Samples			
	3-hr.	24-hr.	3-hr. Avg.		24-hr. Avg.	
	>0.5	>0.14	1st	2nd	1st	2nd
1988	0	0	0.056	0.056	0.027	0.026
1987	0	0	0.056	0.054	0.028	0.028

Sources: 1987 Annual Air Quality Report IEPA, Illinois 1988 Annual Air Quality Report

TABLE 6

Summary of National and Illinois Ambient Air Quality Standards

POLLUTANT	AVERAGING TIME	Standard (@25^{0}c and 760 mm Hg) PRIMARY	SECONDARY
Particulate Matter (TSP)[1]	Annual Geometric Mean	75 ug/m^3	60 ug/m^3
	24-hour	260 ug/m^3	150 ug/m^3
Particulate Matter,[2] 10 micrometers (PM-10)[2]	Annual Arithmetic Mean	50 ug/m^3	Same as Primary
	24-hour	150 ug/m^3	Same as Primary
Sulfure Dioxide (SO_2)	Annual Arithmetic Mean	0.03 ppm (80 ug/m^3)	None
	24-hour	0.14 ppm (365 ug/m^3)	None
	3-hour	None	0.5 ppm (1300 ug/m^3)
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	Same as Primary
	1-hour	35 ppm (40 mg/m^3)	Same as Primary
Ozone (O_3)	1-hour/day	0.12 ppm (235 ug/m^3)	Same as Primary
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm (100 ug/m^3)	Same as Primary
Lead (Pb)	Quarterly Arithmetic Mean	1.5 ug/m^3	Same as Primary

1 The TSP standard is only for Illinois, there is no national standard.

2 The national standard for PM-10 replaced TSP on July 1, 1987; there is currently no state standard.

Note: All standards with averaging times of 24 hours or less are not to have more than one actual or expected exceedance each year.

Source: Illinois 1988 Annual Air Quality Report

Sulfur dioxide levels for Champaign County were lower than the primary and secondary standards for both 1987 and 1988. The highest level three-hour average samples were 0.056 ppm in 1987 and in 1988. The highest level 24-hour average samples were 0.028 ppm in 1987 and 0.0027 ppm in 1988. Trends over the previous six years show a stable sulfur dioxide level. The main source of Sulfur dioxide, which is produced from combustion processes, is the burning of fossil fuels containing sulfur compounds.

The most significant air pollution emission sources at Chanute Air Force Base are motor vehicles. The primary stationary emission sources include the fire training operation, the central heating plant, and the pathological incinerator.

On November 2, 1987 Chanute Air Force Base was issued an operating permit (I.D. No. 019817AAC) by the Illinois Environmental Protection Agency to operate the central heating plant with an electrostatic precipitator. This permit expires December 17, 1989.

3.2.2.2 NPDES Permits

Neither Chanute Air Force Base or the Village of Rantoul have current National Pollution Discharge Elimination System permits for air quality.

3.2.3 Water Resources

3.2.3.1 Ground water

Chanute Air Force Base is supplied with water by nine deep wells that are drilled into the lower glacial deposits of the Kansan aquifer. Seven of the base's wells are located in the northwest section of the base. Four of these wells were drilled along the northern installation boundary. Two wells are located in the southeast section of the base. The Kansan deposit is one of the four hydrogeologic units underlying the base.

The Wisconsinan aquifer (upper glacial deposit) is approximately 70 feet thick. The base lies within the recharge area of this aquifer. Ground water exists within 10 feet of the ground surface. The ground water in the upper part of the aquifer flows toward Salt Fork Creek. Water yields for the Wisconsinan aquifer range from three to 60 gallons per minute.

The Illinoian aquifer can occur at approximately 70 feet in depth. Water wells tap into this aquifer at approximately 50 feet below land surface. The general direction of ground water flow is south. Well yields from the aquifer can be up to 800 gallons per minute in the thicker sand and gravel sections.

The Kansan aquifer occurs at approximately 200 feet below land surface and is composed of approximately 60 feet of sand. The direction of ground water flow in the Kansan aquifer is south. Wells tapping the Kansan aquifer may yield up to 3,500 gallons per minute. During high volume pumping periods, the water levels in the Kansan and Illinoian aquifers decline and stabilize at approximately the same elevation. This indicates some hydraulic connection between the two aquifers.

The bedrock aquifer consists of fractured sedimentary rocks containing highly mineralized water. The bedrock aquifer is not considered a reliable water source due to its low yield and poor water quality.

The Installation Restoration Program Qualification phase has resulted in the use of monitoring wells in the southeast section of the base. These wells were drilled 30 feet into the Wisconsinan aquifer. Concentrations of total dissolved solids exceeding state standards were found in all the landfills and Fire Protection Training Area 2. Oil and grease concentrations exceeded the taste and odor threshold in 64 of the 70 samples. The detected volatile organic compounds, phenols, soluble lead, and chromium did not exceed state federal water quality standards. The results from sampling of the monitoring wells are described in Section 3.2.1.4.

Raw water taken from well samples does not show evidence of ground water contamination from the aquifers tapped for base water supplies. Data from the Illinois Environmental Protection Agency show that only iron has had elevated levels in the wells on the northwest section of the base. The two wells in the southeast section of the base have shown elevated levels of manganese. These elevated levels of iron and manganese do not appear to be causing problems with drinking water because they are in compliance with state and federal drinking water standards.

3.2.3.2 Surface Waters

Surface waters on Chanute Air Force Base include three golf course ponds. Each has a surface area of two acres. These ponds are located east of the base runways. In the past, these ponds were used for fishing, but several years ago this activity was discontinued. Currently, the ponds provide a "hazard" for golfers and add to the beauty of the base.

The recreation lake, located in the southeast section of the base, has a surface area of approximately 20 acres and is used for fishing.

Salt Fork Creek flows along the southern installation boundary and parallels Perimeter Road through the southeastern section of the base. Approximately 1.1 lineal miles of the creek cross installation boundaries, but the creek does not provide any recreational opportunities. Salt Fork Creek receives a majority of the on-base drainage. The water quality from the Installation Restoration Program, Phase II sampling showed trace amounts of some volatile organic compounds and total dissolved solids. Oil and grease had concentrations that exceeded standards. Results of water quality sampling at Salt Fork Creek are described in Section 3.2.1.4.

The Upper Salt Fork drainage ditch flows along the north side of Rantoul then turns south approximately one mile east of the base. This creek is used for waste water treatment plant effluent discharged by the Village of Rantoul. Chanute Air Force Base discontinued discharging into the drainage ditch in late 1987.

3.2.3.3 **Water Quality Permits**

Chanute Air Force Base does not currently operate under any water quality permits.

3.2.3.4 **NPDES Permits**

The Village of Rantoul waste water treatment plant was issued a National Pollution Discharge Elimination System Permit (NPDES) February 21, 1985. The permit (No. IL0022128) was modified August 6, 1986, and expires March 1, 1990.

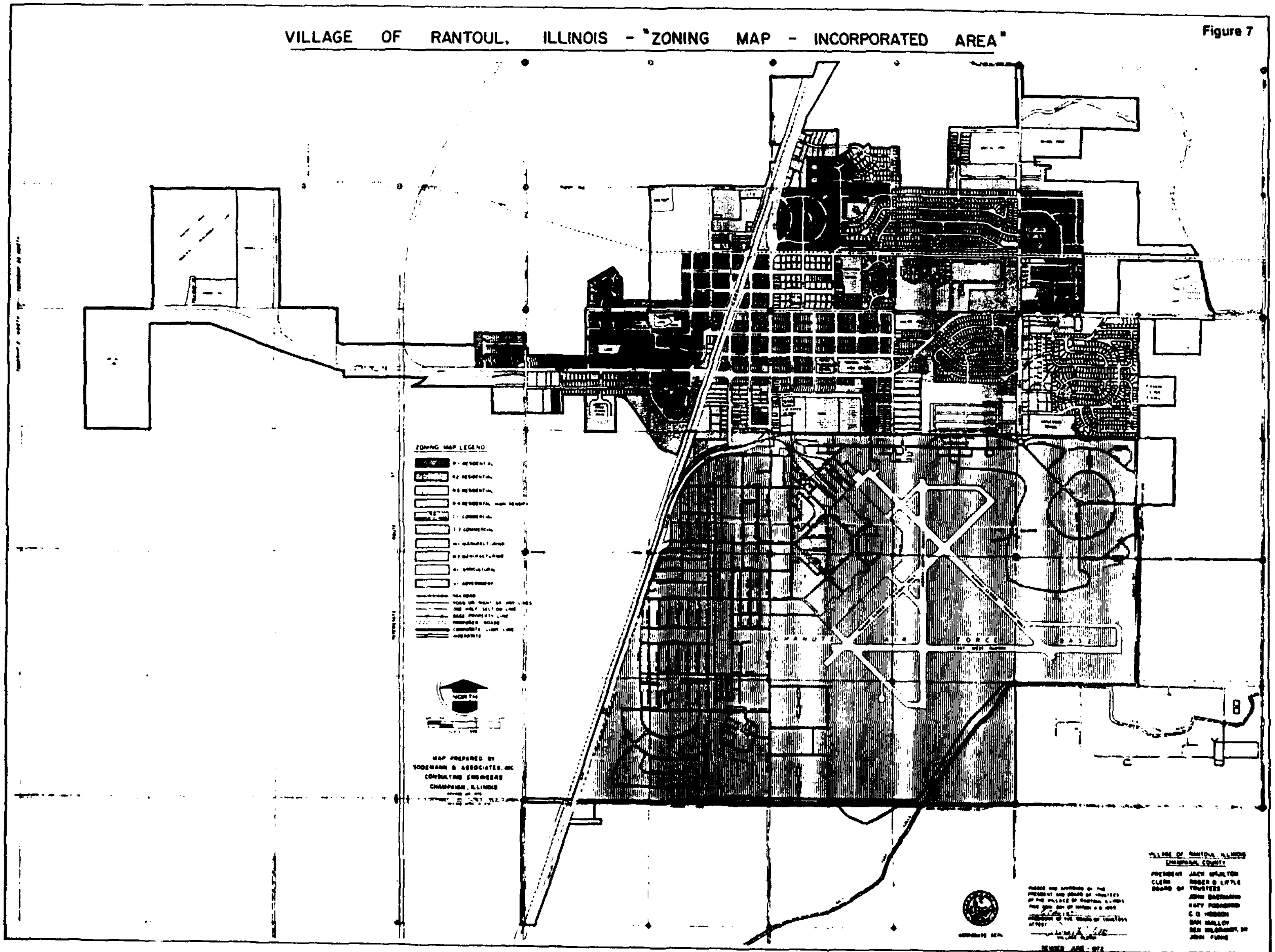
There were no discharges of treated waste water that exceeded the village of Rantoul's NPDES permit standards during the previous 12 months.

Chanute Air Force Base was issued a NPDES permit (No. IL0027073) on September 12, 1983 to authorize discharges into the Upper Salt Fork Drainage Ditch. Chanute Air Force Base has since discontinued the discharge and the permit has been canceled. The base's waste water flow was transferred to the Rantoul Regional Waste water Treatment Plant during November 1987.

3.2.4 Zoning and Political Boundaries

Chanute Air Force Base is located in the Village of Rantoul, an incorporated community situated in east central Illinois, and is directly affected by Rantoul's zoning ordinances. As shown in Figure 7, a variety of zoning districts border the base on the north boundary, including M-1 (Manufacturing), C-2 (Commercial), R-2 (Residential), R-4 (Residential High Density), and A-1 (Agricultural). Chanute Air Force Base is designated as G-1 (Government) on the zoning map. The zoning ordinance for the base provides for the unrestricted use of all property within the base's boundaries. The ordinance also prohibits any restrictions on the type of building construction on the base.

Chanute Air Force Base has several utility and road easements that cross installation boundaries. A sewer and water line easement granted to an individual in the Chapman Court housing project, and the State of Illinois was granted easements for construction of roads. The


VILLAGE OF RANTOUL, ILLINOIS - "ZONING MAP - INCORPORATED AREA"
Figure 7
ZONING MAP LEGEND
NORTH
CHANUTE AIR FORCE BASE

Central Illinois Public Service Company owns a utility easement for a power transmission line along the northern border of the base as well as an outdoor sub-station. Eastern Illinois Telephone Company was granted easements for telephone cables along the west boundary of the base and in the Chapman Court housing project. Right-of-way easements were granted to an individual, Rogers Chevrolet Company, and the Village of Rantoul for construction of roads. Another individual was granted an easement for a drainage line.

3.3 Biological Environment

3.3.1 Wildlife Resources

3.3.1.1 General

Most wildlife species that are still found in the area have greatly reduced populations. The wildlife species that commonly occur in the Chanute Air Force Base area are listed in Table 3. Appendix B provides a list of wildlife species that can be found in east central Illinois. The actual on-base occurrence of these animals is limited by available habitat. Song birds on base are mostly blackbirds, sparrows, and other common urban species. The base is on the edge of the Mississippi flyway for migratory waterfowl. This location may lead to an occasional seasonal appearance of migrating surface feeding ducks (*Anas* sp.), geese (*Branta* sp.), or swans (*Cygnus* sp.). The lack of suitable habitat for these species makes their presence intermittent during the migratory seasons. There are no known nesting sites for predatory birds on base. Hawks and owls inhabit Champaign County but are not frequently observed on the base.

TABLE 7

Animals Common to Chanute Air Force Base

Common Name	Scientific Name
Songbirds	various
Ringneck Pheasant	*Phasianus colchicus*
Water Fowl	various
Squirrels	*Sciurus* spp.
Cottontail Rabbit	*Sylvilagus virginiana*
Muskrat	*Ondatra zibethicus*
Bass	*Micropterus salmoides*
Channel Catfish	*Ictalurus punctatus*
Bluegill Sunfish	*Lepomis macrochirus*
Green Sunfish	*Lepomis cyanellus*
Redear Sunfish	*Lepomis microlophus*
Carp	*Cyprinus carpio*

Source: Chanute AFB Fish and Wildlife Management Plan, 1984

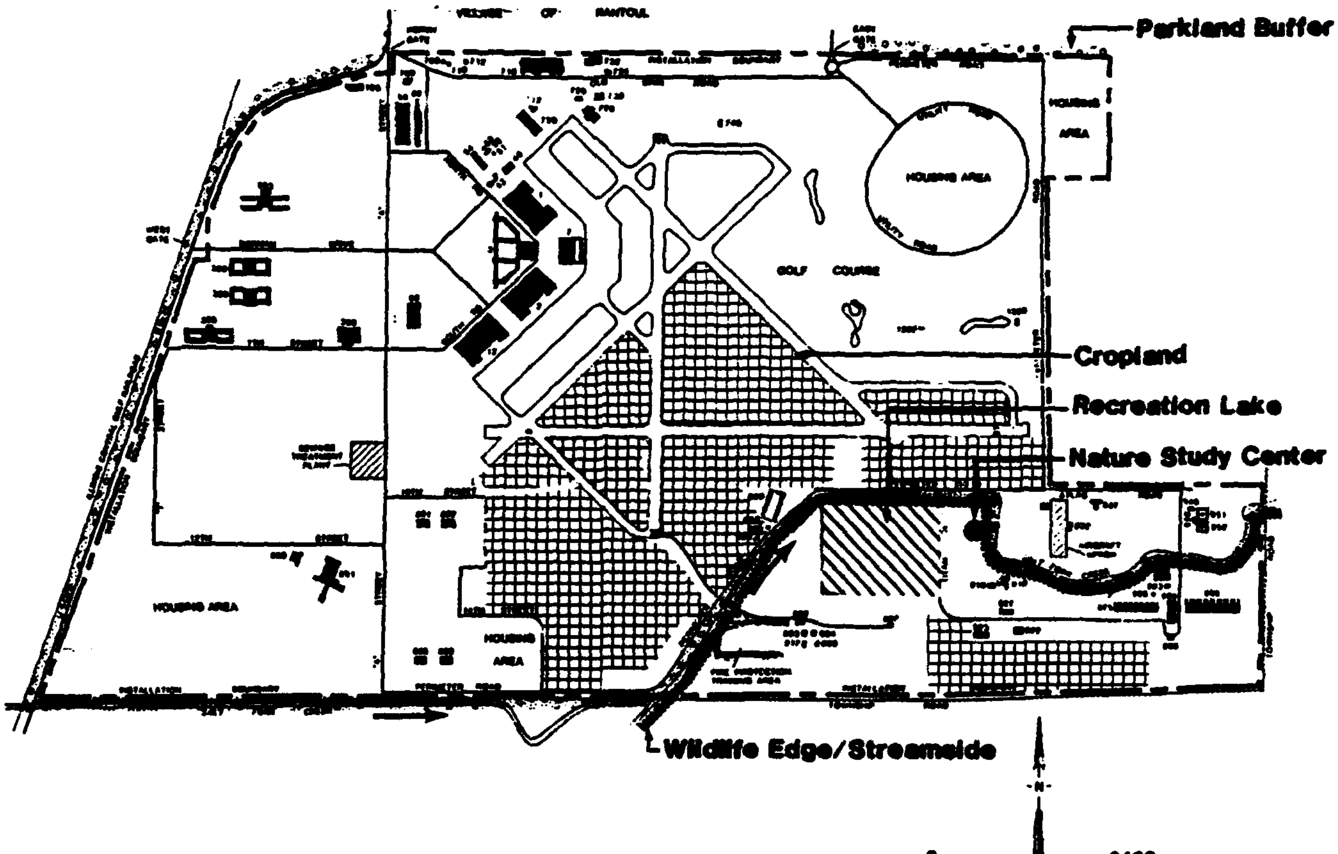
Every five years, the Fish and Wildlife Management Plan is revised and updated. The purpose of this plan is to manage the fish and wildlife habitat in a manner that will maximize the public benefit from the public land. The plan proposes improvements that encompass the concepts of protection, enhancement, alteration, and manipulation of wildlife habitat to realize the benefits that come from multiple use and sustained yield practices. The primary goals of this plan are to develop a diverse habitat for non-game species and to provide additional cover for game species. In addition, the maintenance requirements of wildlife habitat are to be reduced.

The land and water resources for fish and wildlife management are shown in Figure 8 and described in Table 8.

The water resources include golf course ponds, constructed in the 1950s and 1960s. The base recreation lake was added in the mid-1980s. Records were not kept on the stocking of fish in the golf course ponds prior to 1979. In 1979 the United States Fish and Wildlife Service stocked 40 Redear Sunfish in the ponds. These ponds have not been used for fishing in the past four years. The Fish and Wildlife Management Plan does not propose any physical improvements to the golf course ponds. Fish population counts have been taken in the past. The plan describes the need for continued landscaping around the base recreational lake to provide land stability and habitat development. The base recreation lake will also provide improved waterfowl habitat. The lake surface is approximately 20 acres with 6,800 lineal feet of shoreline. The shoreline habitat will be improved to provide nesting sites and food for songbirds and waterfowl. In addition the improvements will control erosion and siltation, which will improve water quality. To improve the streamside habitat (1.1 mile stream), landscaping will be planted to provide food and cover for songbirds and waterfowl. In addition, these plantings will help control erosion which will improve water quality in Salt Fork Creek.

Figure 8

ECOLOGICAL MAP



Source: Fish and Wildlife Management Plan, 1984

LANDSCAPE TYPE	FUNCTIONS		
Parkland Buffer	wind/snow belt	climate control/maintenance	
Wildlife Edge/Streamside			
ornamental	wind/snow belt	cover	songbirds
wildlife cover	wild habitat	food	pheasant
streamside	wild habitat	habitat	
Nature Study Center		education	
		habitat	songbirds
Recreation Lake		habitat	fishing waterfowl recreation
Cropland/Lease	cash grain	food	pheasant

COPY AVAILABLE TO DTIC DOES NOT PERMIT FULLY LEGIBLE REPRODUCTION.

TABLE 8

Fisheries Habitat

Fisheries Habitat (By Water Only)	Acreage	Featured and Associated Species	Featured Species Acreage
Golf Course Ponds			
- East	2.0	Redear Sunfish	2.0
- Middle	2.0	Redear Sunfish	2.0
- West	2.0	Redear Sunfish Carp	2.0
Recreation Lake	20	Largemouth Bass Bluegill Sunfish Channel Catfish	20

Wildlife Habitat

Wildlife Habitat (By cover type)	Acreage	Featured and Associated Species	Featured Species Acreage
Mixed Forest	12	Songbirds, Squirrels	12
Agricultural Land	311	Ringneck Pheasant Cottontail Rabbit	311
Grassland/Field	560	Ringneck Pheasant Cottontail Rabbit	560
Wetland	1.1 miles of stream	Cottontail Rabbit Songbirds	10

Source: Chanute AFB Fish and Wildlife Management Plan, 1984

The land resources provide habitat for several wildlife species found on base. The Fish and Wildlife Management Plan proposes seeding and planting shrubs, trees, and other types of vegetation to provide cover and food. Other developments include the reduction or elimination of cutting grass in the unimproved areas.

Until 1974, no scheduled hunting had been permitted on Chanute Air Force Base. Since then, during the fall hunting seasons, hunts are conducted in a remote area of the base to control the proliferation of rabbit populations. All hunting has been in accordance with base regulations. Chanute Air Force Base has also allowed trapping with one permit issued each year.

The Chanute Air Force Base Fish and Wildlife Management Plan has been developed with the assistance of the United States Department of Interior, Illinois Department of Conservation, University of Illinois, and the U.S. Army Corps of Engineers Construction Engineering Research Laboratory.

3.3.1.2 Threatened, Endangered and Sensitive Species

Threatened and endangered animals that have historically been within 50 miles of the base are listed in Table ¶. The lack of suitable habitat makes their occurrence on base unlikely. These animals have not been observed recently on base or in close proximity.

Recently a nesting pair of upland sandpipers (Bartramia longicanda) have been located approximately five miles south of Champaign-Urbana. This is the only known siting of any of the animals listed in Table ¶ in the area around the base.

3.3.2 Plant Resources

3.3.2.1 General

No natural or undisturbed vegetative associations exist on Chanute Air Force Base. The vegetation is composed of ornamental species, agricultural products, and some native

TABLE 9

Threatened and Endangered Species

Common Name	Scientific Name	Federal Status
Southern Bald Eagle	Haliacetus Leucocephalus leucocephalus	Endangered
Indiana Bat	Myotis sodalis	Endangered
Arctic Peregrine Falcon	Falco peregrinus tundrius	Endangered

Species with State Status

Common Name	Scientific Name	State Status
Upland Sandpiper	Bartramia longicauda	Endangered
Bigeye Chub	Hybopsis amblops	Threatened
River Redhorse	Moxostoma carinatum	Threatened
Northern Madtom	Noturus stigmosus	Endangered
Bluebreast Darter	Etheostoma camurum	Endangered
Silvery Salamander	Ambystoma platineum	Endangered
Northern Harrier	Circus cyaneus	Endangered
Barn Owl	Tyto alba	Endangered
Short-eared Owl	Asio flammeus flammeus	Endangered
Loggerhead Shrike	Lanius ludovicianus	Threatened

Source: Chanute AFB Tab A-1 Environmental Narrative, 1979 grasses and annuals derived from the prairie associations that once dominated the area surrounding the base. The region around the base is under intensive production of corn, soybeans, wheat, and hay.

Two base plans are responsible for all existing plant resources currently on the base. The Landscape Development Plan, which has developed over the last 40 years of landscape planting, and the Cropland Management Plan, which provides Chanute Air Force Base land for agricultural purposes.

The original planting concept for the base was very simple. All streets, walks, and lawns were shaded with trees. Hedges and shrubs were used extensively to control and channel pedestrian movement. Foundation plantings were used to define visual interest and special use areas, and evergreens were used for screening purposes. The plant species found on Chanute Air Force Base are listed in Appendix B. The long-term net effect of the tree planting has been a modification of the base's environment. Many of the shrubs are now gone or are in bad shape. The Landscape Development Plan concluded that plant replacement and maintenance has proven inadequate over the last 15 years.

The Cropland Management Plan operates from two objectives: (1) financial benefits for the Government and the lessor and (2) maintenance of the leased land by the lessor.

The agricultural leased land is found in the central section of the base surrounding the runways. The total leased agricultural area encompasses approximately 311 acres. The leased areas are used for harvesting cash crops (corn and soybeans). The soils affect the maximum yields for crops. On the leased land on base, the maximum yields range from 129 to 160 bushels of corn and 44 to 51 bushels of soybeans. As specified by the Cropland Management Plan, the lease has to follow conservation practices acceptable to the United States Department of Agriculture, Soil Conservation Service. These practices include a corn-soybean rotation plan and tillage methods that provide a 32 percent ground cover after planting.

3.3.2.2 Threatened, Endangered, and Sensitive Species

There are no known threatened or endangered plant species on Chanute Air Force Base.

3.4 Human Environment

3.4.1 Native American Values

Native American cultural sites are not known to exist on or adjacent Chanute Air Force Base.

3.4.2 Archaeological, Cultural, And Historical Resources

There are no know prehistoric or historic archaeological sites known to exist on the base, but the base has not been surveyed by a professional archaeologist.

Currently a study is being prepared, reviewing the status of potential historic buildings at Chanute Air Force Base, shown in Figure 9. The building that houses base headquarters was denied a historic designation by the National Park Service but there will be a reapplication when the building is 50 years old. White Hall is another potential historic site. At this time, there are no designated historic sites on Chanute Air Force Base.

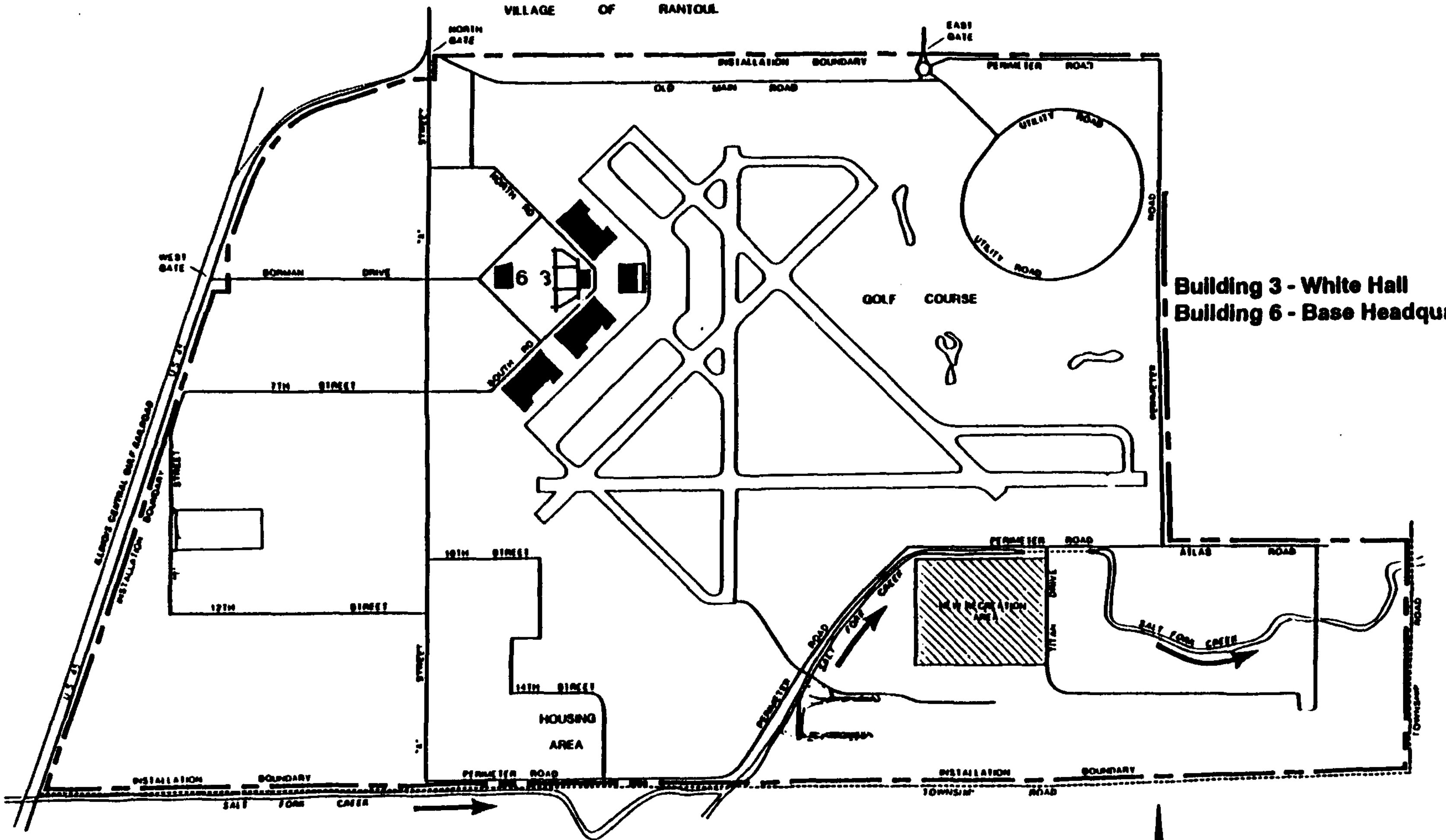
3.4.3 Visual And Aesthetic Values

Chanute Air Force Base is located in a region dominated by relatively flat, agricultural land. To provide a visual break, as well as climate control, landscaping was performed. This landscaping was centered around the original portions of the base. This section is now dominated by mature ash and elm trees. The buildings on base were built in a Georgian/Traditional style. Visually, this original section of the base is the most cohesive area on the base. The consistent use of brick, limestone, and red tile unifies the area architecturally. The landscaping and consistent architectural style have combined to create a campus-like visual environment.

The recreation areas on base provide other visually interesting areas. These areas combine large spaces with somewhat widely spaced mature trees. The golf course and the new recreation lake provide opportunities for bird watching or other outdoor activities.

Figure 9

POTENTIAL HISTORIC BUILDINGS



Building 3 - White Hall
Building 6 - Base Headquarters

Source: Woolpert Consultants, 1989

Several plans have been written over the past few years that address visual aesthetics on Chanute Air Force Base: the Outdoor Recreation Plan, the Fish and Wildlife Plan, the Landscape Development Plan, and the Architectural Environment Guidelines. These plans have components that address landscape issues, such as planting appropriate vegetation in sufficient quantities. This landscaping also provides habitat and food for local wildlife. The Architectural Environment Guidelines proposes to establish a base-wide design theme.

3.4.4 Noise Factors

In 1970, the north-south runway was closed, and in 1971, the east-west runway was closed, at which time Chanute Air Force Base became a non-flying training base. These runway closures eliminated the most significant noise impacts on Chanute Air Force Base and the Village of Rantoul. Since those years, the noise impacts created by normal base operations have been minimal, not exceeding the noise impact that would be expected from a medium-sized city.

3.4.5 Socioeconomic Factors

The socioeconomic factors of the closure of Chanute Air Force Base will be addressed in a second Environmental Impact Statement. The second EIS will discuss and analyze the economic impacts of the base closure and any required mitigation of the economic impacts.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 General Information

The withdrawal and closure alternatives will provide generally positive impacts on the biological and human environments of Chanute Air Force Base. The impacts to these environments will result from the removal of equipment, and base personnel. Buildings that are left may pose somewhat of a negative visual and structural impact if they are not maintained to prevent deterioration. Buildings will not be demolished because of the base closure, but buildings that are now scheduled to be demolished and any unsafe buildings will be town down. The military may no longer be financially or operationally responsible for the base after closure except for any hazardous waste sites that will be cleaned up through the Installation Restoration Program.

Chanute Air Force Base is within the political boundaries of the Village of Rantoul. Once the base is closed Rantoul will acquire jurisdictional control.

The No Action alternative discussed in this section would result in continued use of Chanute Air Force Base for military training and operations.

The land use issues relating to socioeconomic impacts and economic development will be addressed in the second Environmental Impact Statement. This Environmental Impact Statement will address land use issues for short- and long-term impacts related to the withdrawal of military personnel and closure of the base. The consequences of the withdrawal and closure alternatives do not reflect impacts of possible future land uses on the base. At this time any future land uses are unknown.

4.1.1 Climate

There will not be any negative impacts to the climate of the Chanute-Rantoul area as a result of implementation of any alternatives.

At this time there are not any base operations that have an impact on the local climate.

4.1.2 Topography

The topography of the base would be most affected by the No Action alternative. There will probably be only slight changes due to the phased or the quick withdrawal.

The phased or quick withdrawal and closure alternatives will not have an effect on the topography of the base. The slight changes would come during Phase IV of the Installation Restoration Program. This phase may include actions to remediate the hazardous waste problem on base. At this time the actual remedial methods are unknown.

The No Action alternative would provide the opportunity for future changes to the topography of the base. If the military commitment were to continue, there would be need for new landfills in the future which would require alteration of the base's landform. Future development needs related to the military missions would also have an impact on the topography of the base.

4.2 Physical Environment

4.2.1 Geology and Minerals

The geologic and mineral resources that underly the base will not be greatly affected if the No Action alternative were implemented. These resources would not be impacted by the phased or quick withdrawal and closure of the base.

The No Action alternative would not have affects of greater magnitude than currently exist. The only impacts due to base operations would be the drilling of wells into the glacial deposits for drinking water. Chanute Air Force Base gets their sand and gravel from local sand and gravel pit operations. This arrangement would continue with these companies mining sand the gravel resources for the base in addition to their other clients.

The phased and quick withdrawal and closure alternatives would have no short term impacts on geologic and mineral resources. But with the withdrawal and closure of the base there will no longer be an impediment to mining due to the military mission. Depending on base reuse and if it were deemed feasible, the area could be used for mining. These alternatives would have some impact on the amount of sand and gravel that is mined in the area. Without continuing base operations there will no longer be a demand for sand and gravel by the military, reducing the amount mined in the local pits.

4.2.2 Paleontology

There will not be any negative impacts to paleontological resources in the Chanute-Rantoul area due to implementation of any alternatives.

Any paleontological resources that exist in the Chanute-Rantoul area are undiscovered deposits buried in the bedrock. There are no exposed outcrops that would contain fossils on or near Chanute Air Force Base.

4.2.3 Soils

The development of Chanute Air Force Base has generally followed the development potential of the soils on the base. Construction techniques allow development on soils that are not well suited for development. This may have an impact on the future development of the base. Closure of the base should have some positive impacts on the bases soils, because there would no longer be training, maintenance, new construction or new military missions on the base. The elimination of new construction will prevent grading or excavating for base needs, allowing the soil to retain its natural profile. There will be no more compaction of soil due to troop maneuvers, maintenance of grassed areas or use of heavy equipment. The elimination of construction by the military will also reduce the amount of soil erosion that occurs. Areas of prime farmland are currently being utilized for agricultural purposes as part of the base's outlease program. These areas may continue to be available depending on the future uses of the base. The risks of soil contamination by spills or unintended releases of hazardous materials due to military operations would be eliminated.

The current uses which would continue under the No Action alternative, could have some negative impacts due to normal base operations, maintenance due to spills or unintended releases of hazardous materials due to military operations.

Biological Environment

The withdrawal of military personnel and closure of the base will have positive impacts for the biological environment. Because of the lack of maintenance and military operations the base should provide a better habitat for plant and animal species. The animals common to Chanute Air Force Base (Table 5) are ordinarily found in the type of environment that exists on the base. With the elimination of base operations the habitat should increase in quality and size.

The No Action alternative may not have impacts on the biological environment any greater than already exist. These impacts generally limit the quality and quantity of the suitable habitat on base. This alternative could extend base operations which include: grass mowing, herbicide and pesticide use. The exception to limited habitat on base would be the implementation of the Fish and Wildlife Plan which proposes landscaping and changes in operations to create a better quality environment for animal species commonly found on Chanute Air Force Base. Continued operations and training would also include the possibility of hazardous waste spills which has a negative impact on animal and plant habitat.

The Quick Withdrawal and Closure Alternative would have the same impacts as the phased withdrawal but the positive impacts to the biological environment would be realized sooner.

There will not be negative impacts to threatened or endangered plant of animal species as a result of base closure. There have not been any reported sightings of any species listed in Table 9, except for the Upland Sandpiper. A nesting pair have been observed approximately five miles south of Champaign, Illinois. This observation was approximately 20 miles south of Chanute Air Force Base.

During the current use of the base by the military, the suitable habitat for threatened or endangered species has been limited in size and quality. This impact would probably continue to exist under the No Action alternative. The implementation of the Fish and Wildlife Management Plan could possibly increase the quality of habitat for the Upland Sandpiper.

4.2.4 Hazardous Waste Sites, Installation Restoration Program

The closure of Chanute Air Force Base will prevent new hazardous waste sites from being generated by the military in the short-term or the long-term. The elimination of hazardous substances releases will have a positive impact on the biological and physical environment on the base. The impact of hazardous substances releases will probably not be short-term. The sites under investigation will be restricted from future development until they are cleaned up by the air Force.

The No Action alternative would continue the risk of spills and inadvertent releases of hazardous materials during the course of base operations and training. In order to minimize future hazardous waste contamination, planning for future hazardous waste spills or releases must be in accordance with the Air Force's "Guidance Manual for the Preparation of Spill Prevention and Response Plans" (AFWSC, 1987). Chanute Air Force Base has several plans which address hazardous materials. The CTTC Plan 705 Spill Prevention and Response's (1988) purpose is to prevent the discharge of polluting substances or to contain and control the discharges if they do occur, and then clean the site and restore the environment to its former state. The Management of Recoverable and Waste Liquid Petroleum Products, (CAOB Plan 211, 1984) and the Management of Hazardous Waste (CTTC Plan 708, 1986) are documents that provide guidance for the proper management of hazardous waste.

Installation Restoration Program

The Installation Restoration Program (IRP) would not be affected by implementation of any alternative. The IRP is independent of the base closure process, and will continue if needed, after the military mission has been terminated. Through this program the United States air Force is committed to clean-up sites that are identified as being contaminated. During the IRP process there is an on-going search for previously undiscovered contaminated sites.

The Department of Defense (DOD) and the United States Environmental Protection Agency entered into agreement in the Memorandum of Understanding signed in 1983 by the then Assistant Secretary of Defense and Assistant Administrator for the Office of Solid Waste and Emergency Response. This agreement was reached to clarify each Agency's responsibilities and commitments for conducting and financing response actions to releases of hazardous substances. The agreement categories releases of hazardous substances as: releases from current DOD facilities; releases from former DOD facilities; and other releases for which DOD is a responsible party.

AT Chanute Air Force Base there has been releases of hazardous substance on the facility. According to Section 3.1(a) of the Memorandum of Understanding the DOD will conduct and finance the response action or assure that another party directs the response. The EPA will provide technical assistance or advise at DOD's request.

4.3 Air Resources

The Chanute-Rantoul community is within the Illinois Environmental Protection Agency's, East Central Illinois Intrastate Air Quality Control Region. This region enjoys generally good air quality. The only exceedence of air quality standards was for total suspended particulates on one occasion in 1987. The closure alternative would have a positive impact on the already good air quality of the area. The base closure would significantly reduce the number of motor vehicles in the Chanute-Rantoul community resulting in lower automobile emissions. The existing steam generating plant would probably be closed or operated at a reduced level. The pathological incinerator would be shut down. The elimination or reduction of these sources of emissions will increase the air quality of the Chanute-Rantoul area. The particulate pollution will be decreased by reducing the emission sources mentioned above, but due to the intensity of agricultural land use in the area, particulates could still be a source of pollution.

The continuation of base operations would also mean continued use of pollution emitting sources. The extent of use of these sources would depend on the military mission of the base.

4.3.1 Ground water Resources

The base receives its water from nine deep wells drilled into the Kansan aquifer. The closure alternatives would decrease demand for drinking water on the base. The decreased demand in drinking water will have a subsequent decrease on water pumped from the ground water resources. The closure of the base will preclude new construction for military operations. Therefore there will not be and increase in impervious space on base. This will have a positive impact on the upper aquifer because the base is within the recharge area for the Wisconsinan aquifer. The maintenance of the base's vegetation will decrease resulting in less surface water runoff and water will percolate more readily into the ground water aquifer.

The closure of the base will eliminate the risk of inadvertent releases of spills of hazardous materials due to training and base operations. The Air Force is currently in Phase II of the four phase Installation Restoration Program (IRP). As the IRP progresses, the program will reach the fourth phase in which the Air Force will mitigate any ground water pollution.

The continued use of the base for the military mission will have approximately the same impacts on ground water resources as currently exist. There would be a continued risk of hazardous material spills and releases and continued demand for drinking water from the aquifer

4.3.2 Surface Waters

Surface waters on Chanute Air Force Base are relatively scarce. The three golf course ponds total six acres in surface size and may have only been negatively impacted through the use of herbicides and pesticides at a level comparable to any golf course. The closure of the base might decrease the use of pesticides and herbicides providing a positive impact on these water bodies. The recreation lake which was constructed in the last few years would receive the same positive impact as the golf course ponds. The recreation lake is located in the southeast section of the base in the general vicinity of several sites under investigation or hazardous waste contamination. The surface water drainage and the shallow aquifer flow towards Salt Fork Creek on base. This may prevent contaminates from infiltrating the lake. The IRP sites under investigation will be cleaned up during Phase IV of the program so there will be no contamination at those sites once completed.

Salt Fork Creek would receive a positive impact from the closure of the base. There will be no contamination of the creek due to hazardous material spills and application of herbicides and pesticides. The reduction of motor vehicles on the base will result in less pollutants running off parking lots and roads. There will be less surface runoff from construction areas and the base in general. The reduced surface water drainage should result in less siltation of Salt Fork Creek.

The closure of Chanute Air Force Base will result in less waste water flow into the Village of Rantoul's waste water treatment plant. Any subsequent improvement of discharge by Rantoul's treatment plant is not yet determined.

Continued use of the base by the Air Force would include the risk of hazardous waste spills and releases. The number of motor vehicles would be approximately the same and the regular base operations would continue in approximately the same manner as they do today. The environmental impacts from these sources would still be present.

4.4 Human Environment

4.4.1 Native American Values

There will be no impacts on Native American Values as a result of implementation of any alternative.

As Native American cultural sites are not known to exist on or adjacent to Chanute Air Force Base, there will be no impacts.

4.4.2 Archaeological, Cultural and Historical Resources

There will be no known impacts to prehistoric or historic archaeological sites as a result of implementation of any alternative.

There are no known prehistoric or historic archaeological sites known to exist on the base.

Historical Resources

There will possibly be negative impacts to potential historic buildings on base if the phased or quick withdrawal alternatives are implemented, The No Action alternative could provide a positive impact.

The phased or quick withdrawal alternatives would create a negative impact on the buildings that have potential historic status. Base headquarters and White Hall would not receive regular maintenance and upkeep that currently exists. Without this regular maintenance and upkeep, the climatic conditions of the region would cause the buildings to deteriorate. The phased withdrawal would produce less of an impact because these buildings would continue to be maintained by the Air Force for a longer period of time.

The No Action alternative would have a positive impact on Base Headquarters and White Hall. There would be regular upkeep and maintenance of the buildings, as there is now.

4.4.3 Visual and Aesthetic values

All the alternatives could have impacts on the visual and aesthetic values on the base. The buildings and grounds probably would not be maintained at the level that occurs at this time if the phased or quick withdrawal alternatives were implemented. This could lead to deterioration of the buildings on base due to environmental stresses. This deterioration could create a visual blight in the built environment of the base. The vegetation of the base would be affected by the withdrawal and closure. There would no be regular mowing of the base grounds or application of herbicides and pesticides. These effects would be perceived by some as aesthetically pleasing as the biological environment returns to a natural state. The termination of the military commitment prevents the implementation of base plans that address visual and aesthetic improvements on Chanute Air Force Base.

The landscaping of the base could be improved by following the recommendations provided in the Outdoor Recreation Plan, Landscape Development Plan and the Fish and Wildlife Plan. But these recommendations would not necessarily be implemented due to budget restrictions. So it is possible that the continuation of regular base operations would result in improvement of landscape aesthetics on the base. The No Action alternative would also have impacts on the buildings on the base. If the recommendations provided in the Architectural Environment Guidelines were followed, a base wide design theme could be established.

4.4.4 Noise Factors

When flights were discontinued and the runways were closed in the early 1970s, the most significant producer of noise was eliminated from the base. Since that time the noise impacts have been the result of normal base operations and the movement of traffic. These noise impacts would continue at approximately the same level if the military mission that currently exists were to continue.

There will be a decrease in noise levels with the closure of the base due to reductions in traffic and elimination of construction and base operations.

4.4.5 Socioeconomic Factors

The socioeconomic factors of the closure of Chanute Air Force Base will be addressed in a second Environmental Impact Statement. The second EIS will discuss and analyze the economic impacts of the base closure and any required mitigation of the economic impacts.

4.5 Zoning and Political Boundaries

Chanute Air Force Base is within the corporate limit's of the Village of Rantoul and has a zoning ordinance designation of G-1. The closure of the base will not result in any changes of current political boundaries, but could result in a zoning change for this area. The current zoning (designated military) provides for unrestricted use of the property and prohibits any restrictions on the type of building construction on base. The closure of the base and possible future rezoning would allow the Village of Rantoul to gain control of any future land use on the base, as well as tax any future development.

The continued use of the base for military operations, or the No Action alternative, would most likely keep the current zoning as it is. Precluding the Village of Rantoul from exerting control over land use and construction on the base.

4.6 Relationship Between Short-Term Impacts and Long-Term Benefits

The most significant impacts of the closure of Chanute Air Force Base would occur after the closure. The Air Force would no long be committed to maintenance for base grounds and structures. In most cases this will have a positive environmental impact in the long-term, depending on base reuse.

The closure of the base would eliminate all current military uses of the base. After closure there will no longer be the risk of hazardous materials spills or releases due to the military mission. The sites currently under investigation for hazardous contamination will preclude any development in those areas until the areas have been cleaned up. The overall impact will be a cleaner environment in the long-term.

There may be a long-term benefit to the Village of Rantoul due to the closure of Chanute Air Force Base since they will have the opportunity to gain control over the land use on the base property. The socioeconomic impacts are not addressed in this Environmental Impact Statement. Further discussion of short-term impacts and long-term benefits will be discussed in a second EIS.

CHAPTER 5

Agencies Contacted

1) Champaign County

2) Chanute Air Force Base - Major Dave Wittenberg
   Bob Hannah
   Chuck Neil

3) Illinois Environmental Protection Agency - Pat Lindsay
   Roger Callaway

4) Illinois State Geological Survey

5) Illinois State Natural History Survey Division - Dr. Glen Sanderson

6) Sodemann and Associates, Inc. - Mike Little

7) United States Soil Conservation Service, Champaign, Illinois

8) Village of Rantoul - John Reals
   Mayor Podagrosi

List of Individuals Participating in the Public Scoping Meeting
Held march 1, 1989 in the Rantoul Township High School Gym

Mr. Daniel Molloy
Mrs. Katy Podagrosi
Mr. Mike Little
Mr. Delbert Hashmyer
Paul Lewis
Jerry Sinclair
Ms. Dora Metz
Mr. Dannel McCollum
James B. Kingston
Jeff Markland
Bill Seeber
Phil Phillips
Jeff Hulings
Deane Foote
Robert Kidd
Ken Roesslerr
Dennis Long
Gary Grane
George Collings
Paul Wilson
Ms. Marj Ryan
Mr. Kevin Potts
Ms. Laurel Prussing
Charles Sutton
Ms. Marsha Knoblock
David Glisson
Scott Mayer
Jonathan Block
Hack Miller
Ms. Viola Wright
Mr. Ken Heath
David Pforr
Father Malitiowski
Gerald Bailey
Wallace Hewitt
Reverend Robert Gorbold
Reverend Matthew Scott
Reverend Thomas L. Phillips
Lawrence Weaber
Glen Wensch
Robert Acker
Ms. Jean Lukens
Mr. David Padgitt
Carl Hepburn
Ms. Barbara Roesch
Mr. Parry Fink
Arthur Bartell
Eric Bernoff
Dale Lilyfors

List of Groups or Organizations Participating in the Public Scoping Meeting Held March 1, 1989 in the Rantoul Township High School Gym

Aircraft Owners and Pilots Association
Champaign Regional Co-op Vocational System
Greater Urbana-Champaign Economic Development Corporation
Illinois Air Force Association
Illinois Environmental Protection Agency
Military Retirees' Assocation
National Federation of Federal Employees
Parkland College
Rantoul Chamber of Commerce
Rural Champaign County Special Education Co-op
University of Illinois

List or Preparers

Woolpert Consultants

Mark Lawner, PCP, AICP, Project Principal - M.S. City and Regional Planning - 25 years in environmental and city/regional planning.

Fred Zeidman, AICP, Director of Planning - MUP (Master of Urban Planning) - 15 years in city/regional and environmental planning.

Warren C. High, Biologist/Project Manager - B.S. Fisheries and Wildlife Biology - 9 years in environmental biology and impact assessment.

Dave Cornell, P.E., M.S. Civil Engineering - 30 years in environmental program management and administration.

Mark Ray, Biologist - M.S. Environmental Science - 7 years in applied ecology and environmental impact analysis.

Sue Hiller, Environmental Planner - M.S. Soil, Water, and Engineering - 8 years in soil science, environmental planning and archaeology.

A. Carlos Landaburu, Environmental Scientist, PH.D. - 14 years in environmental impact analysis

Robert Flood, Aquatic Biologist, B.S. Bilogy - 3 years in preparation of aquatic baseline studies and environmental impact analysis.

Stephen P. Phipps, Geologist/environmental scientist, B.S. Geology - 4 years geologic mapping and computer modeling.

David Hafley, AICP, Senior Planner - Master of Urban and Regional Planning - years in land use and environmental planning.

Mark S. Cundiff, Environmental/Land Use Planner, M.A. Community Development and Planning - 6 years in land use and environmental planning.

William Wilbert, Senior Landscape Architect/Environmental Planner, B.L.A. Landscape Architecture - 12 years in site analyses and impact assessments.

Will C. Ballard, Environmental Planner, Master of Urban Planning - 2 years land use and environmental planning.

Howard Wienerman, Environmental Scientist, B.S. Science Administration and Biology - 10 years in environmental sampling and analysis.

References

Bull, John, and John Farrand Jr. 1977. The Audobon Society Field Guide to North American Birds. Alfred A. Knopf, New York

Burt, William H. and Richard P. Grossenheider. 1964. A Field Guide to the Mammals. Second Ed. Houghton Mifflin Company, Boston.

Conant, Roger. 1958. A Field Guide to Reptiles and Amphibians. Houghton Mifflin Company, Boston.

Engineering-Science. 1983. Installation Restoration Program, Phase I Records Search, Chanute Air Force Base, Illinois

________________. 1987, Installation Restoration Program, Remedial Investigation Feasibility Study (Phase II- IVA) work Plan Chanute Air Force Base, Illinois.

________________. 1988. Installation Restoration Program, Remedial Investigation - Feasibility Study (Phase II-IVA), Quality Assurance Project Plan, Chanue Air Force Base, Illinois.

Harkness, Terrence G. 1985. Chanute Air Force Base Landscape Development Plan. University of Illinois.

Harland Bartholomew and Associates, Inc. 1987. Chanute Air Force Base Architectural Guidelines Northbrook, Illinois

________________. 1987. Chanute Air Force Base Comprehensive Plan Report. Northbrook, Illinois.

Illinois Environmental Protection Agency. 1988. 1987 Annual Air Quality Report. Springfield, Illinois.

________________. 1989, 1988 Annual Air Quality Report. Springfield, Illinois.

________________. 1987-1989. Groundwater Quality Data for Chanute Air Force Base and the Village of Rantoul. Springfield, Illinois.

________________. 1986-1989. Surface Water Quality Data for Chanute Air Force Base and the Village of Rantoul. Springfield, Illinois.

________________. 1986-1990. National Pollution Discharge Elimination System Permit No. IL0022128 for the Village of Rantoul, Illinois. Springfield, Illinois.

__________________. 1983-1988. National Pollution Discharge Elimination System Permit. No. IL0027073 for Chanute Air Force Base, Illinois. Springfield, Illinois.

__________________.

Indiana Department of Highways, 1989. Procedure Manual for Preparing Environmental Studies. Indianapolis, Indiana.

Marek, Kevin. 1986. Chanute Air Force Base Cropland Management Plan. Chanute Air Force Base, Illinois.

Martin, Alexander C., Arnold L. Nelson, and Herbert S. Zim. 1951. American Wildlife and Plants, a Guide to Wildlife Food Habits, Dover Publications, Inc. New York.

Penney, Jane, P.E. and Terrance Harkness. 1984. Chanute Air Force Base Fish and Wildlife Management Plan. Chanute Air Force Base, Illinois.

__________________. 1984. Chanute Air Force Base Outdoor Recreation Plan. Chanute Air Force Base, Illinois.

Robbins, Chandler S., Bertel Bruun, and Herbert S. Zim, 1983. Revised Ed. Birds of North America. Golden Press, New York.

Roy F. Weston, Inc. 1984. Installation Restoration Program Phase II Problem Confirmation and Quantification, Presurvey Report for Chanute Air Force Base, Illinois. West Chester, Pennsylvania.

__________________. 1986. Installation Restoration Program Phase II Confirmation/Quantification Stage I, Volume I for Chanute Air Force Base, Illinois. West Chester Pennsylvania.

Soil Conservation Service. 1979. Soil Survey of Champaign County, Illinois.

Trautman, Milton. 1981. The Fishes of Ohio. Ohio State University Press, Columbus, Ohio.

United States Air Force. 1985. Air Force Installation Restoration Program Management Guidance.

__________________. 1986. Management of Hazardous Waste CTTC Plan 708.

__________________. 1984. Management of Recoverable and Waste Liquid Petroleum Products, CAFB Plan 211.

__________________. 1988. Spill Prevention and Response Plan, CTTC Plan 705.

__________________. 1979. Tab A-1 Environmental Narrative for Chanute Air Force Base, Illinois.

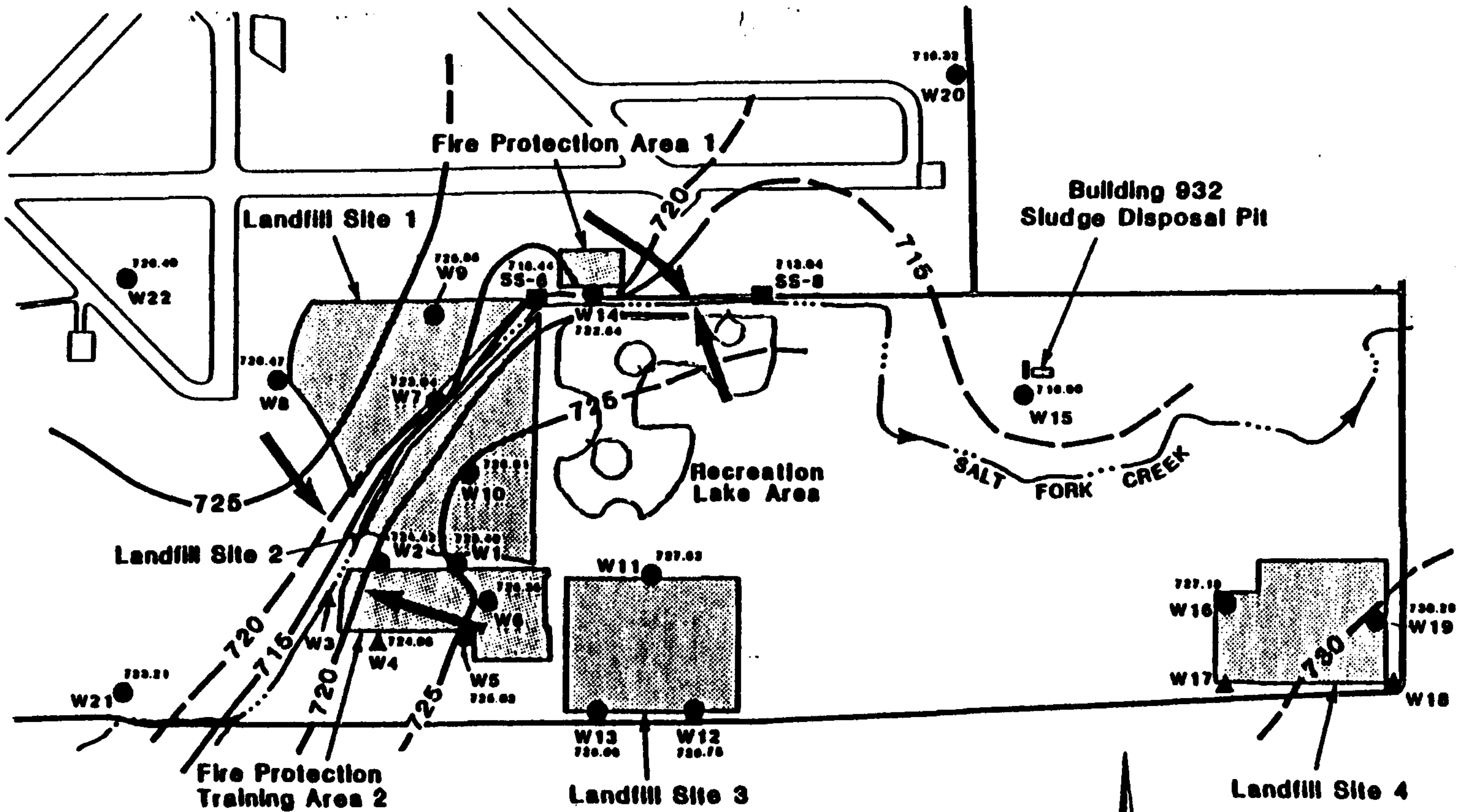
Village of Rantoul. 1969 Zoning and Use Regulating Ordinance Village of Rantoul, Illinois.

INDEX

APPENDIX A

CHANUTE AFB

SHALLOW WATER TABLE AND EXISTING MONITORING WELLS



LEGEND

—720— Water Table Elevation in Feet Above Mean Sea Level; as of January 7-8, 1987. Dashed Where Inferred.

● Monitoring Well and Water Level Elevation

▲ Damaged Monitoring Well

■ Surface Water Gaging Station

SOURCE: IRP PHASE IV-A, ES 1987

SCALE 0 800 FEET

Summary of Water Quality Results
Chanute AFB
Round 1

Analyte SITE	Requested Limit of Quantification	Well Number: Fire Protection Training Area 2							Landfill No. 1		
		W-1	W-2	W-3	W-4	W-4A	W-5	W-6	W-7	W-8	W-9
Total Organic Carbon (mg/l)	1.0	2.2	8.1	8.3	11.6	11.3	2.2	2.7	14.7	NQD	4.1
Oil and Grease (mg/l)	0.1	0.44	0.66	2.23	2.34	0.75	0.16	0.15	0.18	0.18	0.9
Total Phenolics (ug/l)	5	ND	ND	ND	10	9	ND	ND	ND	ND	ND
Total Disolved Solids (mg/l)	1.0	748.0	496.0	562.0	424.0	310.0	380.0	426.0	1080.0	280.0	738.0
Lead (ug/l)	20	NQD	NR	NR	NR	NR	NR	NR	ND	ND	NQD
Chromium (ug/l)	50	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
2,4-D (ug/l)	10	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
2,4,5-TP (ug/l)	1	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND

A - Duplicate
K - Thousand
M - Million
ND - Not Detected (Less Than Detection Limit)
NR - Not Requested
NQD - Not Quantifiable but Detected

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Analyte SITE	REQUESTED LIMIT OF QUANTIFICATION	Well Number --Landfill No.2-- W-10	 W-10A	 ------Landfill No.3------- W-11	 W-12	 W-13	 -FPTA 1- W-14	 ---932--- W-15
Total Organic Carbon (mg/l)	1.0	181	10.3	6.6	4.0	22.5	NQD	3.7
Oil and Grease (mg/l)	0.1	0.75	0.42	0.14	0.53	ND	0.12	NR
Total Phenolics (ug/l)	5	ND	ND	ND	17	ND	ND	ND
Total Disolved Solids (mg/l)	1.0	1100.0	1110.0	782.0	552.0	1000.0	468.0	NR
Lead (ug/l)	20	NQD	NQD	ND	ND	ND	NQD	ND
Chromium (ug/l)	50	ND	ND	ND	ND	ND	ND	NR
2,4-D (ug/l)	10	ND	ND	ND	ND	ND	NR	NR
2,4,5-TP (ug/l)	1	ND	ND	ND	ND	ND	NR	NR

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Analyte / SITE	REQUESTED LIMIT OF QUANTIFICATION	Well Number: Landfill No.4 W-16	Landfill No.4 W-17	Landfill No.4 W-18	Landfill No.4 W-19	X-1 W-20	X-1 W-21	X-1 W-22	FPTA 2 SS-1	FPTA 2 SS-2	FPTA 2 SS-3
Total Organic Carbon (mg/l)	1.0	7.8	1.6	7.4	10.1	NQD	3.2	1.6	213.0	26.0	1.9
Oil and Grease (mg/l)	0.1	6.49	ND	ND	ND	ND	2.45	0.21	35.0	68.4	0.1
Total Phenolics (ug/l)	5	ND	ND	ND	ND	ND	ND	ND	70	296	ND
Total Disolved Solids (mg/l)	1.0	348.0	587.0	694.0	892.0	436.0	682.0	510.0	388.0	428.0	390.0
Lead (ug/l)	20	NQD	ND	ND	ND	ND	ND	ND	NR	NR	NR
Chromium (ug/l)	50	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR
2,4-D (ug/l)	10	NR	NR	NR	NR	ND	ND	ND	NR	NR	NR
2,4,5-TP (ug/l)	1	NR	NR	NR	NR	ND	ND	ND	NR	NR	NR

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Analyte SITE	REQUESTED LIMIT OF QUANTIFICATION	Well Number Landfill No.2			932
		SS-4	SS-5	SS-6	SS-9
Total Organic Carbon (mg/l)	1.0	6.7	5.8	3.6	3.7
Oil and Grease (mg/l)	0.1	3.5	1.45	0.28	NR
Total Phenolics (ug/l)	5	ND	ND	ND	ND
Total Disolved Solids (mg/l)	1.0	398.0	482.0	532.0	NR
Lead (ug/l)	20	ND	ND	ND	ND
Chromium (ug/l)	50	ND	ND	ND	NR
2,4-D (ug/l)	10	ND	ND	ND	NR
2,4,5-TP (ug/l)	1	ND	ND	ND	NR

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Summary of Volatile Organic Analyses - Chanute AFB
Round 1 *

Volatile Compounds	REQUESTED LIMIT OF QUANTIFICATION	Well Number									
SITE		Fire Protection Training Area 2							Landfill No.1		
Units of Concentration ug/L		W-1	W-2	W-2A	W-3	W-4	W-5	W-6	W-7	W-8	W-9
Benzene	4.0	ND	ND	ND	ND	69	ND	ND	ND	ND	ND
Bromoform	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	2.0	ND	4.3	4.0	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	2.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	2.0	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	2.0	ND	ND	ND	ND	15	ND	ND	ND	ND	ND

* The positive identities of VOC's were not confirmed by either second-column gas chromatographic analysis or by mass spectroscopy.

ND - Not Detected - (Less Than Detection Limit)

A - Denotes duplicate sample

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Volatile Compounds SITE Units of Concentration ug/L	Detection Limit	Well Number LF No.2	Landfill No.3				FPTA 1	932	Landfill No.4		
		W-10	W-11	W-12	W-13	W-13A	W-14	W-15	W-16	W-17	W-18
Benzene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.5
2-Chloroethylvinyl Ether	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Volatile Compounds SITE Units of Concentration ug/L	Detection Limit	Well Number											
			X-1			PPTA 2			Landfill No.2			932	
		W-19	W-20	W-21	W-22	SS-1 *	SS-2 *	SS-3	SS-4	SS-5	SS-6	SS-9	SS-9A
Benzene	4.0	4.9	ND	ND	ND	ND	45	ND	ND	ND	ND	ND	ND
Bromoform	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	2.0	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	2.0	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	2.0	7.1	ND	ND	ND	ND	50.5	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	2.0	8	ND	ND	ND	ND	82	ND	ND	ND	ND	ND	ND

* - Method 601: Because of high concentrations of hydrocarbons and foaming during the purging process, a dilution of 1:5 was made on these two samples.

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Summary of Water Quality Results
Chanute AFB
Round 2

Analyte / SITE	REQUESTED LIMIT OF QUANTIFICATION	Well Number: Fire Protection Training Area - 2						Landfill No.1		
		W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-9
Total Organic Carbon (mg/l)	1.0	4.5	8.8	9.1	63.7	4.7	5.9	11.0	3.0	14.4
Oil and Grease (mg/l)	0.10	0.14	0.36	0.57	0.39	0.21	0.39	0.15	0.27	0.18
Total Phenolics (ug/l)	5	ND	ND	7	14	ND	6	12	ND	9
Total Disolved Solids (mg/l)	1.0	728.0	506.0	396.0	358.0	354.0	292.0	1050.0	328.0	622.0
Lead (ug/l)	20	ND	NR	NR	NR	NR	NR	ND	ND	ND
Chromium (ug/l)	50	ND	NR	NR	NR	NR	NR	ND	ND	ND
2,4-D (ug/l)	10	ND	NR	NR	NR	NR	NR	ND	ND (2)	ND (2)
2,4,5-TP (ug/l)	1	ND	NR	NR	NR	NR	NR	ND	ND (2)	ND (2)

A - Duplicate
M - Million
K - Thousand
ND - Not Detected (Less Than Detection Limit)
NR - Not Requested
(1) Holding Time Exceeded By Four Days
(2) Holding Time Exceeded By One Day For Extraction Only

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Analyte SITE	REQUESTED LIMIT OF QUANTIFICATION	Well Number -LF No.2- W-10	--------Landfill No.3-------- W-11	W-11A	W-12	W-13	|-FPTA 1-| W-14	---932--| W-15	W-16	W-16A
Total Organic Carbon (mg/l)	1.0	5.8	7.2	8.2	3.4	8.4	2.2	2.5	8.3	8.1
Oil and Grease (mg/l)	0.10	0.35	.064	0.25	0.54	0.13	0.17	NR	0.45	0.58
Total Phenolics (ug/l)	5	7	6	ND	15	9	7	ND	8	5
Total Disolved Solids (mg/l)	1.0	1070.0	864.0	866.0	206.0	998.0	922.0	NR	1250.0	1280.0
Lead (ug/l)	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium (ug/l)	50	ND	ND	ND	ND	ND	ND	NR	ND	ND
2,4-D (ug/l)	10	ND	ND (2)	ND (2)	ND	ND	NR	NR	NR	NR
2,4,5-TP (ug/l)	1	ND	ND (2)	ND (2)	ND	ND	NR	NR	NR	NR

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Analyte / SITE	REQUESTED LIMIT OF QUANTIFICATION	Landfill No.4			X-1			FPTA 2		
		W-17	W-18	W-19	W-20	W-21	W-22	SS-1	SS-2	SS-3
Total Organic Carbon (mg/l)	1.0	2.6	7.1	21.6	2.2	3.4	2.7	41.4	5340.0	3.4
Oil and Grease (mg/l)	0.10	0.13	0.32	0.51	ND	0.14	0.13	10.1	16400	0.76
Total Phenolics (ug/l)	5	ND	ND	7	11	5	ND	98	43	8
Total Disolved Solids (mg/l)	1.0	498.0	718.0	926.0	232.0	712.0 (1)	1400.0(1)	402.0	1490.0	282.0
Lead (ug/l)	20	ND	ND	ND	ND	ND	ND	NR	NR	NR
Chromium (ug/l)	50	ND	ND	ND	ND	ND	ND	NR	NR	NR
2,4-D (ug/l)	10	NR	NR	[illegible]	ND	ND	ND	NR	NR	NR
2,4,5-TP (ug/l)	1	NR	NR	NR	ND	ND	ND	NR	NR	NR

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Analyte SITE	REQUESTED LIMIT OF QUANTIFICATION	-------Landfill No.2------			|--932--| Well Number
		SS-4	SS-5	SS-6	SS-9
Total Organic Carbon (mg/l)	1.0	2.3	3.4	3.4	6.3
Oil and Grease (mg/l)	0.10	0.35	0.34	0.36	NR
Total Phenolics (ug/l)	5	ND	ND	ND	7
Total Disolved Solids (mg/l)	1.0	32.0	314.0	318.0	NR
Lead (ug/l)	20	ND	ND	ND	ND
Chromium (ug/l)	50	ND	ND	ND	NR
2,4-D (ug/l)	10	ND	ND	ND	NR
2,4,5-TP (ug/l)	1	ND	ND	ND	NR

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Summary of Volatile Organic Analyses - Chanute AFB
Round 2

Volatile Compounds	REQUESTED LIMIT OF QUANTIFICATION	Well Number														
SITE		Fire Protection Training Area 2						Landfill No.1				LF 2		Landfill 3		
Units of Concentration ug/L		W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-8A	W-9	W-10	W-10A	W-11	W-11A	W-12
Benzene	4.0	ND	ND	ND	71	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22*
Bromoform	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	2.0	ND	4.1*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18*
Methylene Chloride	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	2.0	ND	ND	ND	23*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32*
1,1,1-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	2.0	3.8*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	2.0	ND	ND	ND	28*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	96*

A - Duplicate
ND - Not Detected (Less Than Detection Limit)

* The positive identities of VOC's were not confirmed by either second-column gas chromatographic analysis or by mass spectroscopy.

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Volatile Compounds / SITE / Units of Concentration ug/L	REQUESTED LIMIT OF QUANTIFICATION	Well Number														
			FPTA 1		932	Landfill No.4					X1			FPTA 2		
		W-13	W-14	W-14A	W-15	W-16	W-16A	W-17	W-18	W-19	W-20	W-21	W-22	SS-1	SS-2	SS-3
Benzene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	5.9	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND
Methylene Chloride	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18	2<X<10	ND

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Volatile Compounds	REQUESTED LIMIT OF QUANTIFICATION	Well Number				
SITE		--Landfill No.2--			----932----	
Units of Concentration ug/L		SS-4	SS-5	SS-6	SS-9	SS-9A
Benzene	4.0	ND	ND	ND	ND	ND
Bromoform	8.0	ND	ND	ND	ND	ND
Bromomethane	4.0	ND	ND	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND	ND	ND
Chlorodibromomethane	2.0	ND	ND	ND	ND	ND
Chloroethane	2.0	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	2.0	ND	ND	ND	ND	ND
Chloroform	2.0	ND	ND	ND	ND	ND
Chloromethane	4.0	ND	ND	ND	ND	ND
Dichlorobromomethane	2.0	ND	ND	ND	ND	ND
Dichlorodifluoromethane	4.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3.0	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.0	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND
1,1-Dichloroethane	2.0	ND	ND	ND	ND	ND
1,2-Dichloroethane	2.0	ND	ND	ND	ND	ND
1,1-Dichloroethylene	2.0	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.0	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	6.0	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2.0	ND	ND	ND	ND	ND
Ethyl Benzene	2.0	ND	ND	ND	ND	ND
Methylene Chloride	3.0	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2.0	ND	ND	ND	ND	ND
Tetrachloroethylene	4.0	ND	ND	ND	ND	ND
1,2-Trans Dichloroethylene	2.0	ND	ND	ND	ND	ND
Toluene	2.0	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.0	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.0	ND	ND	ND	ND	ND
Trichloroethylene	2.0	ND	ND	3.2*	ND	ND
Trichlorofluoromethane	3.0	ND	ND	ND	ND	ND
Vinyl Chloride	4.0	ND	ND	ND	ND	ND
Xylene	2.0	ND	ND	ND	ND	ND

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

Summary of Soil Quality Results
Chanute AFB

Analyte	REQUESTED LIMIT OF QUANTIFICATION (ug/l)	SITE / SAMPLE: Fire Protection Training Area 2 — W-4 Well Cuttings (ug/l)	Building 932 Sludge Pit — Sludge (mg/kg)
EP Toxicity Metals			
As	10	ND	NR
Ba	10	70	NR
Cd	10	ND	NR
Cr	10	ND	NR
Pb	10	ND	NR
Hg	0.5	ND	NR
Se	10	ND	NR
Ag	2.5	ND	NR
Ignitability		Not Ignitable	NR
Total Lead		NR	50

ND - Not Detected (Less Than Detection Limit)
NR- Not Requested

Source: Excerpt from IRP, Phase II Stage I, Roy F.Weston, Inc., 1986

APPENDIX B

SPECIES LIST FOR CENTRAL ILLINOIS

Species	Scientific Name
Birds	
Grebe, pied-billed	Podilymbus podiceps
Goose, Canada	Branta canadensis
Duck, mallard	Anas platyrhynehos
Duck, black	Anas rubripes
Duck, wood	Aix sponsa
Duck, common goldeneye	Bucephala clangula
Duck, buffle head	Bucephala albeola
Duck, American merganser	Mergus merganser
Duck, hooded merganser	Lophodytes cucullatus
Duck, pintail	Anas acuta
Duck, gadwall	Anas strepera
Duck, shoveler	Spatula clypeata
Duck, blue-winged teal	Anas discors
Duck, green-winged teal	Anas carolinesis
Duck, red head	Aythya americana
Vulture, turkey	Cathartes aura
Hawk, Cooper's	Accipter cooperii
Hawk, sharp-shinned	Accipter striatus
Hawk, marsh	Circus cuaneus
Hawk, rough-legged	Buteo lagopus
Hawk, red-tailed	Buteo jamaitensis
Hawk, red-shouldered	Buteo lineatus
Hawk, broad-winged	Buteo platypterus
Hawk, sparrow	Falco sparverius
Falcon, peregrine	Falco peregrinus
Eagle, Golden	Aquila chrysaetos
Quail, bobwhite	Colinus virginianus
Grouse, ruffed	Banasa umbellus
Heron, black-crowned night	Nycticorax nycticorax
Heron, great blue	Ardea herodias
Heron, green	Butorides virescens
Creeper, brown	Certhia familiaris
Wren, mouse	Troglodytes aedon
Wren, bewick's	Thryomanes bewickii
Wren, common	Thryothorus ludovicianus
Wren, long-billed	Telematodytes palustris

Source: Excerpt from Chanute AFB Fish and Wildlife Management Plan, 1984

Mockingbird	Mimus polyglottos
Catbird	Dumetella carolinensis
Thrasher, brown	Taxostoma rufum
Robin	Turdus migratorius
Thrush, wood	Hylacichla mustelina
Bluebird, Eastern	Sialis sialis
Gnatcatcher, blue-gray	Polioptila caerula
Kinglet, golden-crowned	Regulus satrapa
Waxwing, cedar	Bombycilla cedrorum
Shrike, loggerhead	Lanius ludovicianus
Vireo, white-eyed	Vireo ariseus
Vireo, yellow-throated	Vireo flavifrons
Vireo, red-eyed	Vireo olivaceus
Vireo, warbling	Vireo gilvus
Warbler, black and white	Mniotilta varia
Warbler, prothanotary	Protonotaria citrea
Warbler, parula	Parula americana
Warbler, cerulean	Dendroica cerulea
Warbler, pine	Dendroica pinus
Ovenbird	Seirus aurocapillus
Yellowthroat	Geothlypis trichas
Chat, yellow-breasted	Icteria virens
Redstart, American	Setophage ruticilla
Meadowlark, Eastern	Sturnella magna
Oriole, orchard	Icterus spurius
Oriole, Baltimore	Icterus galbula
Tanager, scarlet	Piranga olivacea
Bunting, indigo	Passerina cyanea
Goldfinch, American	Spinus tristis
Towhee, rufous-sided	Pipilo erythropthalmus
Junco, slate-colored	Junco hyemalis
Sparrow, chirping	Spizella passerina
Sparrow, field	Apizella pusilla
Sparrow, song	Melospiza melodia
Swallow, barn	Hirundo rustica
Swallow, cliff	Petrochelidon pyrrhonita
Swallow, tree	Iridoprocne bicolor
Swallow, bank	Riparia riparia
Swallow, rough-winged	Stelgidopteryx ruficollis
Martin, purple	Progne subis
Egret, common	Casmerodius albus
Bittern, American	Botaurus lentiginosus
Bittern, least	Ixobrychus exilis
Killdeer	Charadrius vociferus
Plover, golden	Pluvialis dominica
Sandpiper, spotted	Actitis macularia

Source: Excerpt from Chanute AFB Fish and Wildlife Management Plan, 1984

Yellowlegs, greater	Totanus melanoleucus
Yellowlegs, lesser	Totanus flavipes
Rail, Virginia	Rallus limicola
Rail, king	Rallus elegans
Rail, black	Laterallus jamaicensis
Coot, American	Fulica americana
Gallinule, common	Gallinula chloropus
Woodcock, American	Philohela minor
Snipe, common	Capella gallinago
Dove, mourning	Zenaidura macroura
Cuckoo, yellow-billed	Coccyzus americanus
Cuckoo, black-billed	Coccyzus erythropthalmus
Owl, screech	Otus asio
Owl, great-horned	Bubo virginianus
Owl, long-eared	Asio otus
Owl, short-eared	Asio flammeus
Owl, barn	Tuto alba
Owl, barred	Strix varia
Owl, saw-whet	Aegolius acadecus
Whip-poor-will	Caprimulgus vociferous
Nighthawk, common	Chordeiles minor
Kingfisher, belted	Megaceryle alcyon
Hummingbird, ruby-throated	Archilochus colubris
Flicker, yellow-shafted	Colaptes auratus
Woodpecker, pileated	Dryocopus pileatus
Woodpecker, red-bellied	Centurus carolinus
Woodpecker, red-headed	Melanerpos erythrocephalus
Woodpecker, hairy	Dendrocopus villosus
Woodpecker, downy	Dendrocopus pubescens
Sapsucker, yellow-bellied	Sphyrapicus varius
Flycatcher, great-crested	Myiarchus crinitus
Phoege, Eastern	Sayornis phoebe
Pewee, Eastern wood	Contopus virens
Kingbird, Eastern	Tyrannus tryannus
Lark, horned	Eremophia alpestris
Chickadee, black-capped	Parus atricapallus
Titmouse, tufted	Parus bicolor
Nuthatch, white-breasted	Sitta caroninensis
Nuthatch, red-breasted	Sitta canadensis

Source: Excerpt from Chanute AFB Fish and Wildlife Management Plan, 1984

Newt, central	Diemictylus viridescens
Salamander, small-mouthed	Ambystoma texanum
Salamander, Eastern tiger	Ambystoma tigrinum
Toad, Fowler's	Bufo woodhousei
Spring pooper	Hyla crucifer
Frog, Blonchard's cricket	Acris crepifans
Frog, leopard	Rana pipens
Bull frog	Rana catesbeiana

Fish

Bass largemouth	Micropterus salmoides
Bluegill	Lepomis machrochirus
Channel catfish	Ictalurus punctatus
Crappie, black	Promoxis nigro-maculatus
Crappie, white	Promoxis annalaris

Source: Excerpt from Chanute AFB Fish and Wildlife Management Plan, 1984

a. The plant species list is as follows:

(1) Trees, Deciduous, Shade

(a)	American Linden	Tilia americana
(b)	Ash, Green	Fraxinus pennsylvania lanceolata
	Ash, White	Fraxinus americana
	Black Locust	Robinia pseudo-acacia
	Elm, Siberian	Ulmus pumila
	Hackberry	Celtis occidentalis
	Horsechestnut	Aesculus hoppocastanum
	Honeylocust	Gleditsia triacanthos
	Honeylocust, Thornless	Gleditsia triacanthos inermis morain
	Maple, Wieri Cutleaf	Acer saccharum dasycarpum wieri
	Maple, Silver	Acer saccharum dasycarpum
	Maple, Red	Acer rubrum
	Mountain Ash European	Sorbus aucuparia
	Pin Oak	Overcus palustris
	Sweet Gum	Liquidambar stracifolia
	Sycamore	Platanus occidentalis

(2) Trees, Deciduous, Small

(a)	Crabapple	Malus floribunda
(b)	Crabapple, Bechtel	Malus ionensis plena
	Crabapple, Halliana	Malus halliana
	Crabapple, Hopa	Malus hopa
	Crabapple, Sargenti	Malus sargenti
	Flowering Dogwood	Cornus florida rubra

Source: Excerpt from Chanute AFB Tab A-1 Environmental Narrative, 1979

Hawthorn, English	Crataeous oxy-acantha
Mountain Ash	Sorbus angusti-folia
Purple Leaf Plum	Prunus trilosa
Purple Leaf Plum	Prunus americana newport
Red Bud	Cercis canad ensis

(3) Trees, Evergreen, Conifers, Large

Colorado Blue Spruce	Picea pungens
Norway Spruce	Picea excelsa
Koster Blue Spruce	Picea pungens kosteriana
Austrian Pine	Pinus nigra
White Pine	Pinus strobus
Scotch Pine	Pinus sylvestris
Douglas Fir	Pseudotsuga douglasi
Camaert Red Cedar	Juniperus vergini-ana camaerti
Ketler Red Cedar	Juniperus vergini-ana ketleeri
Silver Red Cedar	Juniperus vergini-ana glauca
Eastern Arborvite	Thuya occidentalis
Japanese Yew Spreading	Taxus/cuspidata
Upright Japanese Yew	Taxus/cuspidata capitata
Hatfield Yew	Taxus media hat-fieldi
Hicks Yew	Taxus media hicks

(4) Shrubs, Deciduous

Persian Lilac	Syringa persiea
Common Lilac	Syringa vulgaris
Forsythia	Forsythia inter-media
Rose of Sharon	Hibiscus syriacus
Spirea	Spirea vanhouftei
Flowering Quince	Chagnomeles japonica
Mock Orange	Philadelphus lemoine

Source: Excerpt from Chanute AFB Tab A-1 Environmental Narrative, 1979

Privet	Licustrum vulgare
Japanese Barberri	Berberus thunbero
False Indigo	Amorpha fruticosa
Tatarian Dogwood	Cornus alba
Baileys Dogwood	Cornus baileyi
European Buning Bush	Euonymus europarus
Winter Honey-suckle	Lonicera fragrant-issima
Morrow Honey-suckle	Lonicera morrowi
Glossy Buckthorn	Thamnus frangula
Common Buckthorn	Thamnus chatarica
Japanese Rose	Rosa multiflora
Common Snowberris	Symphoricarpus racemosus
Panicle Hydrangea	Hydrangea paniculata grandiflora
Siberia Pea	Caragana arborescens
Weigelia Crimson	Weigelia eva rathke
Red Chokberry	Aronia arbutifolia
Sweet Shrub	Calylanthus floribus

(5) Shrubs, Evergreen, Conifer, Low Growing

Fitzer Juniper	Juniperus chiuensis pfitzeriana
Andora Juniper	Juniperus communis depressa plumosa
Tamarischifolia Juniper	Juniperus sabina tamariscifolia

(6) Shrubs, Evergreen, Broadleaf

American Holly	Ilex opaca
Spreading Euonymus	Euonymus patens
Winged Euonymus	Euonymus alatus

(7) Ground Covers

Periwinkle, Large Leaf	Vinca major
Periwinkle, Small Leaf	Winca minor
English Ivy	Hedera helix
Halls Honeysuckle	Lonicera japonica halliana

Source: Excerpt from Chanute AFB Tab A-1 Environmental Narrative, 1979